

WHAT IS THE PRIMARY ETIOLOGY OF CONTEMPORARY SOMALI PIRACY
AND CAN THE CURRENT U.S. COUNTER-PIRACY STRATEGY
BE EFFECTIVE WITHOUT ADDRESSING IT?

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

TIKO STILES CROFOOT, LCDR, U.S. NAVY
B.S., United States Naval Academy, Annapolis, Maryland, 2001

Fort Leavenworth, Kansas
2015

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 12-06-2015		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2014 – JUN 2015	
4. TITLE AND SUBTITLE What is the Primary Etiology of Contemporary Somali Piracy and Can the Current U.S. Counter-Piracy Strategy be Effective without Addressing It?				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
				5d. PROJECT NUMBER	
6. AUTHOR(S) LCDR Tiko S. Crofoot, U.S. Navy				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
				8. PERFORMING ORG REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				10. SPONSOR/MONITOR'S ACRONYM(S)	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT In 1991, Somalia collapsed into civil war. A lack of governmental regulations and control of territorial waters ensued. Nations blatantly disregarded Somali sovereignty and encroached on its territorial waters and fishing rights. Somalis, who depended on the sea for their livelihood, viewed this encroachment helplessly. Small groups began to rob the more vulnerable foreign national vessels that stole their fish. Eventually, Somalis recognized that piracy for ransom was a way to make a living. Somewhere along the way, Somalis stopped conducting piracy for social reasons and began to conduct it for economic ones. Twenty years later, Somali piracy has become a multi-million dollar business with economic, political, strategic, and human costs that cannot be ignored. Various militaries, commercial organizations, and non-governmental entities have begun to focus on the problem of modern-day piracy. However, all have approached piracy at its conclusion; the attacks at sea. In fact, only one percent of all anti-piracy funds focus on its etiologies. Many believe piracy can be defeated without addressing the causes and drivers. However, to be successful, a holistic approach must first determine the true causes of contemporary piracy before we can propose solutions.					
15. SUBJECT TERMS Somalia, Horn of Africa , Piracy, Pirate, Ransom					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	85	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: LCDR Tiko Stiles Crofoot

Thesis Title: What is the Primary Etiology of Contemporary Somali Piracy and Can the Current U.S. Counter-Piracy Strategy be Effective Without Addressing It?

Approved by:

_____, Thesis Committee Chair
LTC Candy S. Smith, M.A.

_____, Member
Phillip G. Pattee, Ph.D.

_____, Member
LTC Christopher W. Cirino, M.A.

Accepted this 12th day of June 2015 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

WHAT IS THE PRIMARY ETIOLOGY OF CONTEMPORARY SOMALI PIRACY AND CAN THE CURRENT U.S. COUNTER-PIRACY STRATEGY BE EFFECTIVE WITHOUT ADDRESSING IT?, by LCDR Tiko Stiles Crofoot, 85 pages.

In 1991, Somalia collapsed into civil war. A lack of governmental regulations and control of territorial waters ensued. Nations blatantly disregarded Somali sovereignty and encroached on its territorial waters and fishing rights. Somalis, who depended on the sea for their livelihood, viewed this encroachment helplessly. Small groups began to rob the more vulnerable foreign national vessels that stole their fish. Eventually, Somalis recognized that piracy for ransom was a way to make a living. Somewhere along the way, Somalis stopped conducting piracy for social reasons and began to conduct it for economic ones.

Twenty years later, Somali piracy has become a multi-million dollar business with economic, political, strategic, and human costs that cannot be ignored. Various militaries, commercial organizations, and non-governmental entities have begun to focus on the problem of modern-day piracy. However, all have approached piracy at its conclusion; the attacks at sea. In fact, only one percent of all anti-piracy funds focus on its etiologies. Many believe piracy can be defeated without addressing the causes and drivers. However, to be successful, a holistic approach must first determine the true causes of contemporary piracy before we can propose solutions.

ACKNOWLEDGMENTS

I would like to thank all of the instructors who helped mentor and encourage me through this process. While they are too numerous to mention individually, I would like to specifically thank some of the standouts. LTC Chris Cirino, who, as my SGA, allowed me my full expression, oftentimes at the detriment of his lecture. He kept me engaged throughout classes foreign to me, a difficult task to be sure, and illustrated what it means to be a professional officer. LTC Candy Smith, my chair, who faithfully steered me toward a completed thesis and who endured endless queries from me without frustration as my P930 instructor. She is the epitome of patience and I am so thankful for her guidance. Dr. Pattee, a member of my committee, who took the time to consistently critique and suggest throughout this year, and whose feedback and suggestions were invaluable in the writing of this thesis. Dr. Nowowiejski, my Scholars professor, who took a chance on a member of a foreign service to become part of his rigorous program. He, along with his wife, repeatedly opened their home and their counsel to each of the Scholars. He critiqued, sculpted, and questioned our beliefs to help mold, in each one of us, a more well thought, well read, well spoken, and professional officer. He is a credit to the rarified world of military academics and it has been an honor to know him. Thank you all for your mentorship, guidance, and counsel throughout this year. It has been a privilege, and I leave taking more from you than I have given.

To my parents, who, above all others, encouraged and guided me towards every goal. Who endlessly cheered from the sidelines, even when I lost. Who cried, even when I won. Who are the two people of whom I am most proud, and, when I grow up, whom I want to be just like. You will always be my amaranthine imagos.

To Stefani, my beautiful wife, mentioned last because she is most important; for patience I do not deserve, for support I did not earn, and for the unconditional love of a partner who looks beyond the reality to see the potential. I love you endlessly.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS.....	vii
ACRONYMS.....	ix
ILLUSTRATIONS	x
TABLES	xi
CHAPTER 1 INTRODUCTION	1
Overview.....	1
Problem Statement.....	4
Primary Research Question	5
Secondary Research Questions.....	5
Definition of Piracy	5
Current U.S. Counter Piracy Strategy.....	8
Etiologies of Somali Piracy	10
Limitations.....	14
Delimitations.....	15
CHAPTER 2 LITERATURE REVIEW	18
Why Piracy is a Serious Threat to U.S. Interests, Economics, and Personnel both Stateside and Abroad	18
What Does International Law Say about Piracy?	18
Can U.S. Counter Piracy Strategy be Used to Affect Pirate Etiologies?.....	20
Contemporary HOA Piracy: Overview.....	21
Economic Costs	21
Political Implications	25
Strategic Implications	26
Human Costs	30
CHAPTER 3 RESEARCH METHODOLOGY	34
Overview.....	34

CHAPTER 4 ANALYSIS—ECONOMIC OR SOCIAL	36
Number of Pirate Attacks in HOA.....	36
Violence in HOA Piracy	39
Size of Ransoms Paid	43
Range of Pirate Operations	45
Value of Vessels Attacked.....	47
Normalizing the Trends	50
Quantitative Analysis.....	52
Average Ransoms Paid per Year versus Number of Pirate Attacks	55
Total Ransoms Paid per Year versus Number of Pirate Attacks	56
Somalia per Capita GDP versus Number of Pirate Attacks.....	57
Ships Transiting the Suez Canal versus Number of Pirate Attacks	58
Are At-Sea Measures Enough to Overcome the Economic Drivers?	59
Analysis Summary	62
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS	66
Conclusion	66
Recommendations.....	67
BIBLIOGRAPHY	71

ACRONYMS

CTF	Combined Task Force
GDP	Gross Domestic Product
HOA	Horn of Africa
IMB	International Maritime Bureau
SUA	Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea

ILLUSTRATIONS

	Page
Figure 1. Total Cost of Somali Piracy in 2012.....	21
Figure 2. Rerouting of Vessels Due to Piracy	23
Figure 3. Worldwide Piracy Attacks	27
Figure 4. Main Maritime Circulation	28
Figure 5. Etiology Logic Chart.....	34
Figure 6. Maritime Piracy and Armed Robbery Incidents Reported, 1995-15 August 2013.....	36
Figure 7. Western Indian Ocean Pirate Attacks, 1995-2013	37
Figure 8. Acts of Piracy and Armed Robbery, 1995-2013.....	40
Figure 9. Incidents by Severity, 1995-2013	41
Figure 10. Types of Arms Used in Pirate Attacks.....	42
Figure 11. Total Ransoms Paid–Indian Ocean Piracy, 2005-2012	44
Figure 12. Range of Indian Ocean Pirate Operations.....	45
Figure 13. Attacks by Jurisdiction in the Western Indian Ocean	46
Figure 14. Attacks per Median Gross Tonnage.....	48
Figure 15. Types of Vessels Targeted	49
Figure 16. Normalized Piracy Trends #1	50
Figure 17. Normalized Piracy Trends #2	51
Figure 18. Total Economic Cost of West African Piracy in 2013	60
Figure 19. GNI per Capita.....	61
Figure 20. GNI per Capita Adjusted	62

TABLES

	Page
Table 1. Regression Analysis Data	53
Table 2. Regression Analysis of Average Ransoms Paid per Year versus Number of Pirate Attacks.....	55
Table 3. Regression Analysis of Total Ransoms Paid per Year versus Number of Pirate Attacks.....	56
Table 4. Regression Analysis of Somalia per Capita GDP versus Number of Pirate Attacks	57
Table 5. Regression Analysis of Ships Transitting the Suez Canal versus Number of Pirate Attacks.....	58

CHAPTER 1

INTRODUCTION

Overview

Piracy is robbery with violence, often segueing into murder, rape and kidnapping. It is one of the most frightening crimes in the world.

—Nick Harkaway, *The Blind Giant*

Piracy has occurred as long as people have traversed the oceans with items of value. The earliest documented history of piracy is found over 3,500 years ago in Egyptian texts and illustrations, Hittite sources, and from archaeological data that chronicles the Sea Peoples.¹ These pirates were a confederacy of seafaring raiders who likely originated from Western Anatolia or Southern Europe and invaded Anatolia, Syria, Canaan, Cyprus, and Egypt toward the end of the Bronze Age.² Hundreds of years later, the Phoenicians, Greeks, and Romans would take to piracy to extend their wealth and power; the Phoenicians becoming some of the first organized “slavers.”³ Later in the Middle Ages, Vikings, Moors, Asians, and Europeans would discover the lucrative nature of piracy and roam thousands of miles in their conquests of the high seas.⁴

The 17th century ushered in the golden age of piracy as empires sought to expand their colonial holdings. As monarchies raced to outdo each other in conquest and to compile bullion, the amount of seaborne trade and value skyrocketed. Pirates and privateers found themselves in the midst of a target rich environment where they often had faster ships, more motivated crews, tacit governmental support, and little to no universal condemnation of their actions.⁵

It was not until the 18th century that organized piracy saw the end of its heyday. Nations began to recognize the economic cost of piracy; both to their treasury and in the toll of lives lost. They recognized that allowing piracy threatened and diminished the power and autonomy of nations to expand and engage in commerce. Nations took stock of the costs associated with reallocating assets to deal with piracy, the cost of circumventing avoidance areas, and the cost of reduced expansion and growth because of piracy and determined that cost to be untenable.⁶

As the economic tolls of piracy became evident, established nations took action to outlaw its practice. In 1698, England passed the Piracy Act. This law “effectively enabled admirals to hold a court session to hear the trials of pirates in any place they deemed necessary, rather than requiring that the trial be held in England.”⁷ These arbiters were also vested with “full power and authority” to issue warrants, summon the necessary witnesses, and “to do all things necessary for the hearing and final determination of any case of piracy, robbery, and felony.”⁸ Pirates received no legal representation at these trials and, because of the new laws, governments found guilty and executed 600 pirates (ten percent of all active pirates at the time).⁹ Over the next two hundred years, as governments became recognized, universal maritime law was established, piracy became an international offense, merchant vessels increased in size and technology, and worldwide naval patrolling improved, the allure and economic benefits of piracy decreased. By the mid to late 20th century, piracy occurred only sporadically in austere parts of the globe and was more an anomaly than a true threat to individuals or economics.

However, history is often cyclic. In 1991, Mohamed Siad Barre's government of Somalia, over which he had ruled since seizing control in 1969, collapsed into civil war.¹⁰ With the fall of Barre's Somali Democratic Republic, a lack of governmental regulations and control of territorial waters ensued. Nations blatantly disregarded previously recognized boundaries and encroached on Somalia's territorial waters and fishing rights. Somalis, most of who depended on the sea for their livelihood, viewed this encroachment helplessly. Small groups of Somalis begin to rob the smaller and more vulnerable foreign national vessels that plied their waters stealing fish. As time passed, Somalis recognized that pirating these vessels and ransoming them back to their owners was a way in which to make a living. If the government did not protect their livelihood, and foreign nations did not respect their sovereign waters, they would find their own way to survive and deal with what they considered an invasion of their territorial boundaries and the theft of their national resources.

Twenty years later, Horn of Africa (HOA) piracy has become a multi-million dollar business. With powerful financial backers, advanced weaponry and equipment, and a robust organization of negotiators and arbiters to broker their deals, these organizations have a significant negative effect on maritime traffic in the Indian Ocean. The economic, political, strategic, and human costs created by modern piracy are too much to ignore. Because of these effects, various militaries, commercial organizations, and non-governmental entities have begun to focus on the problem of modern-day piracy. However, all have approached piracy at its conclusion; the attacks at sea. In fact, only one percent of all anti-piracy funds focus on its etiologies. Many believe piracy can be defeated without addressing the causes and drivers. However, to be wholly successful,

the collective approach must surpass tactics and delve into the culture, etiologies, enablers, and causes of piracy.

Problem Statement

Global commons enable trade, exploration, commerce, and war. Societies rely on shared access to these global commons and have agreed that they will remain for the use and benefit of all. When these areas are threatened or nationalized, global powers have responded aggressively to ensure continued public use. Piracy has always been an affront to the notion of global commons. It threatens trade and commerce, restricts and prohibits recreational use of the seas, threatens citizens, and demands the attention and finances of governments.

While every location in the world has seen a marked decline in piracy, the threat off the coast of Somalia has skyrocketed in the last few years. As the Somali pirates become more advanced and successful, more prolific and far ranging, and more dangerous and lethal, the nations of the world have begun to look more closely at what once was a nuisance. The economic, political, strategic, and human toll has caused nations to determine that they must address piracy. As a result, these nations have begun to dedicate assets and resources to eliminating the threat. However, piracy is multifaceted. Organizations and governments currently only address attacks at sea. They do not address the root causes of the disease itself. This paper will determine what the root cause of Somali piracy is and will explore whether the United States can combat piracy effectively without addressing this etiology. It will seek to understand whether the current strategy is a reactionary, and losing battle.

Primary Research Question

This paper will explore the drivers that exist in Somalia that have contributed to the reemergence of piracy in that region. It will ask whether the U.S. war against piracy in Somalia can be successful without combatting the etiology that underlies the issue.

Secondary Research Questions

In order for forces to be effective in combatting piracy, the problem's subsets must be understood. To do this, the following questions must be answered:

1. What is Piracy? How does the international community define it? How has this definition changed over time? Is it currently comprehensive enough to encompass what the threat may evolve into in the future?
2. What is the current U.S. counter piracy strategy?
3. What is the etiology of piracy in Somalia?

Definition of Piracy

There are many definitions of piracy currently in use today. While most accurately capture the general nature of the crime, they lack a comprehensive approach to how it should be prosecuted. Article 101 of the 1982 United Nations (UN) Convention on the Law of the Sea (UNCLOS) says that piracy consists of any of the following acts:

any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:

on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft:

against a ship, aircraft, persons or property in a place outside the jurisdiction of any State:

any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;

any act inciting or of intentionally facilitating an act described in sub-paragraph (1) or (2).¹¹

The shortfall in this description of piracy is that it only applies to acts that occur outside the jurisdiction of any State. This limits piracy to acts committed on the high seas. Article 105 of the convention, Seizure of a Pirate Ship or Aircraft states:

On the high seas, or in any other place outside the jurisdiction of any State, every State may seize a pirate ship or aircraft, or a ship or aircraft taken by piracy and under the control of pirates, and arrest the persons and seize the property on board. The courts of the State which carried out the seizure may decide upon the penalties to be imposed, and may also determine the action to be taken with regard to the ships, aircraft or property, subject to the rights of third parties acting in good faith.¹²

While this governance gives every state the right to pursue, interdict, arrest, and even prosecute pirates in international water, it is clear that that right stops at the territorial limits. Only the host nation itself has the right to combat piracy in its own territorial waters. Without the express permission of the host nation, another state cannot address piracy in another country's territorial waters.

In 1992, the UN ratified the *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation* (SUA). While refraining from using the word piracy, Article 3 defines Unlawful Acts as the following:

1. Any person commits an offense if that person unlawfully and intentionally:
 - a. Seizes or exercises control over a ship by force or threat thereof or any other form of intimidation; or
 - b. Performs an act of violence against a person on board a ship if that act is likely to endanger the safe navigation of that ship; or
 - c. Destroys a ship or causes damage to a ship or to its cargo which is likely to endanger the safe navigation of that ship; or

d. Places or causes to be placed on a ship, by any means whatsoever, a device or substance which is likely to destroy that ship, or cause damage to that ship or its cargo which endangers or is likely to endanger the safe navigation of that ship; or

e. Destroys or seriously damages maritime navigational facilities or seriously interferes with their operation, if any such act is likely to endanger the safe navigation of a ship; or

f. Communicates information which he knows to be false, thereby endangering the safe navigation of a ship; or

g. Injures or kills any person, in connection with the commission or the attempted commission of any of the offenses set forth in the subparagraphs (a) to (f).

2. Any person also commits an offence if that person:

a. Attempts to commit any of the offenses set forth in paragraph 1: or

b. Abets the commission of any of the offences set forth in paragraph 1 perpetrated by any person or is otherwise an accomplice of a person who commits such and offense: or

c. Threatens, with or without a condition, as is provided for under national law, aimed at compelling a person to do or refrain from doing any act, to commit any of the offenses set forth in paragraph 1, subparagraphs (b), (c), and (e), if that threat is likely to endanger the safe navigation of the ship in question.¹³

While this definition of Unlawful Acts certainly includes piracy, and is rather more descriptive than the Law of Sea definition, it still suffers from the same jurisdictional limitations. The SUA states “This Convention applies if the ship is navigating or is scheduled to navigate into, through or from waters beyond the outer limit of the territorial sea of a single State, or the lateral limits of its territorial sea with adjacent States.”¹⁴ The convention is clear that, within a country’s territorial waters, the onus of combatting piracy falls on the host nation.

The legal implications of the UNCLOS definition and the SUA euphemisms for piracy also compound the issue. UNCLOS specifically defines piracy as occurring on the

high seas while SUA never even uses the word piracy. The combination of these two arbiters connotes the implication that piracy, from a legal perspective, cannot occur inside a country's territorial waters. However, many of the incidents that take place within territorial waters are also piracy.¹⁵

In an attempt to create a standardized definition for piracy, the International Maritime Bureau (IMB) now defines it as, "An act of boarding or attempting to board any ship with the apparent intent to commit theft or any other crime with the apparent intent or capability to use force in furtherance of that act."¹⁶ The noticeable difference between this definition and the UNCLOS or SUA definitions is that there is no jurisdictional limitation to piracy. Additionally, the UNCLOS definition includes aircraft while the SUA and IMB definitions do not. While the exclusion of aircraft piracy in the IMB definition might someday warrant change, contemporary piracy has focused solely on vessels at sea. Therefore, the IMB definition remains suited to the current threat. The IMB definition also acts as a baseline definition for reporting purposes. Because of its applicability, the IMB definition is now the standard definition of piracy. This paper will utilize the IMB definition.

Current U.S. Counter Piracy Strategy

In June of 2014, the President issued the *United States Counter Piracy and Maritime Security Action Plan*. The document affirmed the vital U.S. national interest in global maritime security and articulated government policy for countering piracy, robbery at sea, and related maritime crime. It provided overarching guidance to develop objectives to enhance maritime security in other regions of the world as required based on

evolving and emerging threats. It also superseded all previous counter piracy action plans.¹⁷

The document establishes both national strategy and policy concerning piracy. It asserts the U.S. role as the “leader in combatting piracy” and establishes that the government will leverage “all appropriate instruments of national power to repress piracy and related maritime crime.”¹⁸ Included with the standard four elements of national power (diplomacy, information, military, economic), this document also recognizes the importance of the “social,” “judicial,” “law enforcement,” and “intelligence” instruments in the fight against piracy.¹⁹ It establishes a working alliance between the United States and other nations to combat piracy. It also acknowledges the role that international and regional organizations, non-governmental organizations, and the maritime industry play and promises to maximize coordination between the efforts of all parties involved.²⁰

The document establishes the primary efforts of the United States as focusing on preventative actions, interruption of piracy acts, and building maritime security and governance capacity in affected states to hold pirates accountable. It establishes the tasks for the U.S. government as the following:

- Reduce the vulnerability of the maritime domain to piracy and related maritime crime;
- Prevent pirate attacks and related maritime crime against U.S. vessels, persons, and interests, as well as those of our allies and partners;
- Interrupt and terminate acts of piracy and related maritime crime consistent with international law and the rights and responsibilities of coastal, flag, and other States;
- Ensure that those who commit acts of piracy and related maritime crime are held accountable for their actions by facilitating the prosecution of suspected pirates and ensure that persons committing maritime crime are similarly help

accountable by regional, flag, victim, or littoral States, or, in appropriate cases, the United States;

- Preserve the freedom of the seas, including all the rights, freedoms, and uses of the sea recognized in international law;
- Protect ocean commerce and transportation;
- Continue to lead and support international efforts to combat piracy and related maritime crime and urge other States to take decisive action both individually and through international efforts;
- Build the capacity and political will of regional States to combat piracy and related maritime crime, focusing in particular on creating institutional capacity for governance and the rule of law; and
- Strengthen national law to better enable successful prosecution of all members of piracy-related criminal enterprises, including those involved in financing, negotiating, or otherwise facilitating acts of piracy or related maritime crime.²¹

While the policy priorities from region to region will remain the same, the ways and means the government uses to respond will vary according to the geographic, political, and legal environment. Regardless of region, the U.S. counter piracy strategy will focus on three primary areas: prevention of attacks, response to acts of maritime crime, and enhancing maritime security and governance.²²

What is notable about the current U.S. counter piracy strategy is its broadness. While application of appropriated assets have, to date, been primarily focused on at-sea measures, the verbiage of the document clearly alludes to a broader allowance for what is within the purview of U.S. national strategy interests. The strategy very clearly allows the U.S. government to counter piracy by addressing its etiologies.

Etiologies of Somali Piracy

Most believe that piracy has existed as long as man has plied the oceans for transport, conquest, and commerce. The sentiment that all piracy stems from greed is also

pervasive. However, as seen after the fall of Mohamed Siad Barre's government in Somalia in 1991, circumstances can influence people towards piracy. While no circumstance justifies piracy, U.S. strategy may have to address the etiologies to effectively combat piracy itself.

Somalia's lapse into an intractable clan-based civil war following the deposition of Barre caused the nation to become the textbook definition of a failed state. Its lack of government and industry caused entire generations to believe that violence was the rule in life rather than the exception.²³ Puntland's former interior minister, Mohamed Kalombi, described the problem saying, "Young people get attracted into this business because there is very high unemployment here, almost 100 percent, with no factories or industry. But now they see the chance to make millions of dollars through crime. With their money, the pirates are buying weapons and even bribing the justice institutions so that they will not be caught."²⁴ One pirate confirmed this saying, "I became a pirate because I realized it was the only way a Somali like me can make good money. I can afford to buy a new car and home, and when we are back on shore we have big parties, with girls, lots to drink, and plenty of qhat."²⁵ While local fisherman are lucky to make five dollars a day with a decent catch, ransom shares for pirates can run into the tens of thousands of dollars.²⁶

Complicating matters was the fact that piracy and the ransom monies were creating the first economic boom in Somalia since the fall of Barre. While local politicians and religious leaders not on the pirate payroll preached against piracy, the evidence of its success contrasted with the abject poverty. Ransom money allowed people to replace squalid shacks with new villas and to exchange bicycles and motorbikes for

high end sport utility vehicles. Therefore, while many preached against the evils of piracy, faced with the evidence of its success, few listened.²⁷

While greed and poverty are certainly contributing factors to the rise of contemporary piracy, other dynamics play a part. Peter Chalk, a senior policy analyst for the RAND Corporation, lists the following seven reasons for the emergence of piracy in the contemporary era:

1. A growing trend toward the use of “skeleton crews,” both as a cost-cutting measure and as a reflection of more advanced navigation technology.
2. 9/11 significantly heightened the general difficulties associated with maritime surveillance. Pressure exerted on many governments to invest in expensive land-based homeland security initiatives has further reduced limited resources for monitoring territorial waters.
3. Lax coastal and portside security has enabled low-level pirate activity, especially harbor thefts against ships at anchor. The lack of functioning maritime police presence or units that are devoid of adequate staff, boats, equipment and training also is contributory.
4. Corruption and easily compromised judicial structures have encouraged official complicity in high-level pirate rings. The nature of this involvement ranges from providing intelligence on ship movements and locations to helping with the rapid discharge of stolen cargoes.
5. The endemic anarchic situation in Somalia contributes directly to the rampant scale of piracy off the Horn of Africa. The lack of a countrywide ruling government allows for virtual “free-run” of the area by gangs who enjoy

widespread latitude to enforce “rules” that further and protect their own vested interests.

6. The willingness of ship owners to pay increasingly large sums of money for the return of their vessels and cargoes has provided added incentive to engage in maritime crime. The prospect of windfall profits whose magnitudes regularly reach into the millions far outweighs any attendant risk of being caught or otherwise confronted by naval and coast guard patrol boats.
7. The global proliferation of small arms has provided pirates (as well as terrorists and other criminal elements) with an enhanced means to operate on a more destructive and sophisticated level. These munitions include pistols, light/heavy caliber machine guns, automatic assault rifles, anti-ship mines, hand-held mortars, and rocket-propelled grenades. The availability of weapons such as these, most of which are readily transportable, easy to handle, cheap, and durable, is one of the main underlying causes that has contributed to the growing level of violence that has come to typify piracy in recent years.²⁸

While Chalk focuses primarily on external influencers as the preponderant factor for why piracy has reemerged, others impute the rise more heavily to internal causes. In a 2009 Congressional Research Service Report for Congress, an African Affairs Analyst, Lauren Ploch describes the motivations as the following:

While the profitability of piracy appears to be the primary motivating factor for most pirates, other observers argue that since conditions in Somalia make survival difficult for many and prosperity elusive for most, the relative risk of engagement in piracy seems diminished. According to the final report of the experts group convened in 2008 by the U.N. Special Representative to Somalia, “poverty, lack of employment, environmental hardship, pitifully low incomes, reduction of pastoralist and maritime resources due to drought and illegal fishing

and a volatile security and political situation all contribute to the rise and continuance of piracy in Somalia.”²⁹

While there are varying hypotheses for the causes of piracy in HOA, as demonstrated by both Chalk and Ploch, this paper will divide the etiologies into two categories: social and economic. The social considerations will include the cultural acceptability of piracy, whether piracy was a means to defend sovereign resources, and whether it arose from a nationalistic defense of the Somali homeland.

The economic considerations will study whether alternate options for employment exist and how they contrast with the potential rewards of piracy. The paper will consider whether the current ransoms override the risk of capture and death when compared to the standard of living as offered by the current government of Somalia.

The paper will attempt to determine whether it is social or economic etiologies that drive contemporary piracy. It will then seek to determine if current at-sea measures are sufficient to eradicate, or hold to a level of acceptability, piracy in HOA.

Limitations

This paper will study the contemporary cause of piracy from a western perspective. The literature available is in the English language, of western authorship, and presumptively of that bias. Literature describing pirate etiology from the Somali perspective is not available. This paper will be unclassified and, as such, will not contain specific tactics, techniques, procedures, or methods currently in use whose release might be restricted. The paper will not be able to consider the firsthand views or perspectives of Somali residents unless taken from text. The author does not have access to Somalia or persons residing there. However, firsthand experience of the pirate situation, certain

drivers, and the geography and economic situation of Somalia will be included as relevant.

Delimitations

This paper will look to determine whether Somali piracy can be combatted without addressing its etiologies. It will consider the question solely from a U.S. government perspective and will not include the role that other countries, militaries, or organizations might, could, or should play in combatting piracy. The paper will only consider Somali piracy. While piracy exists in many other parts of the world, and other parts of Africa as well, this paper is only concerned with those pirate activities off the coast of Somalia. This paper will explore the etiologies of modern day Somali piracy, but it will not conduct an assessment or analysis of religion as a cause. It accepts that religion may play a part in contemporary piracy, but for the purposes of this paper, it will not attempt to weigh religion's effect. This paper will attempt to answer the question of whether piracy in Somalia can be defeated if the U.S. only combats its at-sea elements. It will look to explore the primary etiology and determine if U.S. anti-piracy actions are sufficient or if leaders must expand the current policy to include addressing the underlying drivers.

¹ Encyclopedia Britannica, "Sea People," last updated 22 December 2014, accessed 20 March 2015, <http://www.britannica.com/EBchecked/topic/530679/Sea-People>.

² Ibid.

³ Cindy Vallar, "Pirates and Privateers: The History of Maritime Piracy, Ancient Pirates," 2009, accessed 10 March 2015, <http://www.cindyvallar.com/ancientpirates.html>.

⁴ Cindy Vallar, "Pirates and Privateers: The History of Maritime Piracy, Medieval Pirates," 2010, accessed 8 March 2015, <http://www.cindyvallar.com/medieval.html>.

⁵ Ibid.

⁶ The International Royal Navy Museum, "Piracy," 2002, accessed 1 March 2015, http://www.royalnavalmuseum.org/info_sheets_piracy.htm.

⁷ William III, "1698-9: An Act for the more effectuall Suppressions of Piracy," *Statutes of the Realm* 7 (1695-1701): 590-594, British History Online, accessed 5 March 2015, <http://www.british-history.ac.uk/statutes-realm/vol7/pp590-594>.

⁸ Ibid.

⁹ Ibid.

¹⁰ Global Security, "Somalia Civil War," accessed 11 December 2014, <http://www.globalsecurity.org/military/world/war/somalia.htm>.

¹¹ International Maritime Organization, "Piracy and Armed Robbery against Ships," accessed 23 November 2014, <http://www.imo.org/OurWork/Security/PiracyArmedRobbery/Pages/Default.aspx>.

¹² United Nations, *United Nations Convention on the Law of the Sea-UNCLOS Article 105*, United Nations Oceans and Law of the Sea, 10 December 1982, accessed 10 October 2014, http://www.un.org/depts/los/convention_agreements/texts/unclos/part7.htm.

¹³ United Nations, *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation*, 10 March 1988, accessed 13 December 2014, <http://www.un.org/en/sc/ctc/docs/conventions/Conv8.pdf>, 4-5.

¹⁴ William M. Davis, "Analysis of the Strategy to Combat Maritime Piracy" (Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2009), 4.

¹⁵ Ibid.

¹⁶ Ibid., 22.

¹⁷ US President, *United States Counter Piracy and Maritime Security Action Plan* (Washington, DC: The White House, June 2014), 2, accessed 13 October 2014, https://www.whitehouse.gov/sites/default/files/docs/united_states_counter_piracy_and_maritime_security_action_plan_2014.pdf.

¹⁸ Ibid., 3.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid., 4.

²² Ibid.

²³ Colin Freeman, “Piracy and Terrorism: Why Somalia?” *The Telegraph*, 10 February 2014, accessed 19 October 2014, <http://www.telegraph.co.uk/sponsored/culture/captain-phillips-film/10367538/somali-piracy-reasons-causes.html>.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Peter Chalk, *Maritime Piracy: Reasons, Dangers, and Solutions* (Santa Monica, CA: Rand Corporation, February 2009), 5-6, accessed 2 November 2014, http://www.rand.org/content/dam/rand/pubs/testimonies/2009/RAND_CT317.pdf.

²⁹ Lauren Ploch, Christopher M. Blanchard, Ron O’Rourke, R. Chuck Mason, and Rawle O. King, Congressional Research Service Report for Congress R40528, *Piracy off the Horn of Africa* (Washington, DC: Library of Congress, 27 April 2011), 10, accessed 2 November 2014, <http://fas.org/sgp/crs/row/R40528.pdf>.

CHAPTER 2

LITERATURE REVIEW

Why Piracy is a Serious Threat to U.S. Interests, Economics, and Personnel both Stateside and Abroad

The effects of piracy are fourfold and comprise economic costs, political implications, strategic implications, and the human cost. Each alone carries significant risk to U.S. interests and the global marketplace. The deleterious effect of piracy on the global commons is measureable and has had a significant impact in the last two decades. Although the majority of pirate activity occurs around the HOA, the effects are global and no nation can ignore them.

In addition to the tangible negative effects that piracy causes, international law directs all nations to contribute to the eradication of piracy on the high seas. It mandates that each country with a capable sea-going navy prosecute piracy. In response to this, the United States developed its own Counter Piracy Strategy that it currently employs in the Indian Ocean.

What Does International Law Say about Piracy?

Piracy is the earliest example of universal jurisdiction in international law.¹ It is a breach of *jus cogens* or compelling law. Called a preemptory norm, *jus cogens* is a fundamental principle of international law accepted by the international community. Considered a commonly held belief, the international community does not allow deviation from these norms.²

While there is no clear criteria for what determines “*jus cogens*,” it is generally accepted that genocide, slaving, torture, non-refoulement, wars of aggression, territorial

aggrandizement, and maritime piracy are included.³ In addition to the commonly accepted kidnap and ransom tactics of modern pirates, maritime piracy includes theft on the high seas, endangering maritime communications, and inhibiting trade. Sovereign states consider all of these are actions to be “hostis humani generis” or “enemies of humanity.”⁴

Because piracy falls under universal jurisdiction, states or international organizations can target and prosecute criminals regardless of where the crime was committed. In addition, universal jurisdiction allows states and international organizations to disregard nationality and country of citizenship or residency. The international community considers these actions crimes against all. Because of this, jurisdictional arbitrage does not apply.⁵

While the notions of *jus cogens* and universal jurisdiction make it clear that any nation can, and should, prosecute piracy, the previously described UNCLOS Article 101 and SUA definitions of piracy have a flaw. They limit the scope of pirate activity to only those actions committed in international waters. This presents a significant problem for countries that are not able to regulate and protect their own territorial waters. Somalia is one of these countries.

In an effort to circumvent the international waters restriction of the UNCLOS and SUA definitions, the IMB instituted their own definition that does not limit the prosecution of piracy to international waters. The IMB definition clearly allows universal jurisdiction to apply to a nation’s territorial waters if they are not able to enforce the preemptory norms themselves.

Three factors clarify the stance of international law on piracy. First, the international community has clearly recognized piracy as a violation of a preemptory norm and a crime against all. Second, the establishment of universal jurisdiction has clarified the rights of all nations to prosecute piracy. Lastly, the IMB's definition of piracy, which removes the territorial waters restriction previously codified by the UNCLOS and SUA definitions, currently allows nations and international organizations to prosecute piracy in all locations. These three factors demonstrate the international community's recognition of the threat of piracy, and elucidate their efforts to allow its prosecution.

Can U.S. Counter Piracy Strategy be Used to
Affect Pirate Etiologies?

The IMB's removal of the territorial waters restriction and the assertion in the *US Counter Piracy and Maritime Security Action Plan* that the United States is the "leader in combatting piracy," that it will leverage "all appropriate instruments of national power to repress piracy," and which recognizes the importance of "social," "judicial," "law enforcement," and "intelligence" instruments in the fight against piracy⁶ clearly gives the U.S. authority to expand its counter piracy actions to "on-shore" measures.⁷ The U.S. acknowledgement that international and regional organizations, non-governmental organizations, and the maritime industry must play a part in this fight, and the government's promise to maximize coordination between the efforts of all parties involved, makes it clear that the United States feels this fight will likely extend beyond the current "at-sea" measures and onto the shores of Somalia.⁸

Contemporary HOA Piracy: Overview

Economic Costs

Twenty years after the fall of Barre's government, what began as a means to survive transformed into an organized and highly lucrative business. In 2013, it was estimated that Somali pirates cost the global economy from \$5.7-\$6.1 billion⁹ (other organizations put the figure as high as \$18 billion).¹⁰ These figures comprise nine key components; increased speeds, military operations, security, re-routing, insurance, labor, ransoms, counter piracy organizations, and prosecutions and imprisonment.¹¹ While these economic figures are staggering, they have the potential to increase if they are not addressed in the near future.



Figure 1. Total Cost of Somali Piracy in 2012

Source: Jonathan Bellish, *The Economic Cost of Somali Piracy 2012*, Oceans Beyond Piracy, 2013, 8, accessed 15 December 2014, http://oceansbeyondpiracy.org/sites/default/files/attachments/View%20Full%20Report_1.pdf.

Increased Speeds: Vessel hijacking has not occurred at speeds greater than eighteen knots. As a result, ships increase speed in high threat areas in order to deter hijackings. This increased speed translates to a significant increase in fuel consumption.¹² In 2012, shipping companies spent an extra \$1.53 billion on fuel costs associated with steaming at faster than optimal speeds in order to prevent pirate attacks.¹³

Military Operations: As pirate attacks increased and received greater media coverage, the military embarked on a mission of deterrence. This role became offensive when U.S. hostages were involved. The cost of vessel protection detachments and deployments, reconnaissance of aircraft and unmanned aerial vehicles, the administrative costs of naval operations, and Shared Awareness and Deconfliction meetings amounted to \$1.09 billion in 2012. While this was a decrease of fourteen percent over 2011, much of the savings were the result of an increased role by foreign nations including India, Russia, South Korea, Japan, and China. This allowed the European Union Naval Force Operation Atlanta, North Atlantic Treaty Organization Operation Ocean Shield, and the Combined Task Force 151 (CTF-151) to deploy fewer assets.¹⁴ While the budgets of foreign militaries is not available, the overall global cost of combatting piracy from a military expense perspective is substantial.

Security: Comprised of equipment and guards, security costs ran as high as \$2.06 billion in 2012. While the cost of equipment decreased eleven percent from 2011 figures, an increased acceptance of the use of guards on vessels resulted in a 79.7 percent increase in expenditures on personnel security.¹⁵

Re-routing: It cost the shipping industry \$290.5 million in 2012 to re-route vessels out of high risk areas. Companies who would have previously taken the most direct route

across the Indian Ocean now transited along the coast of the Arabian Peninsula and the Indian coast.¹⁶ This increased the time at sea and the distance traveled translating to increased fuel consumption, wages, and wear and tear on the vessels.

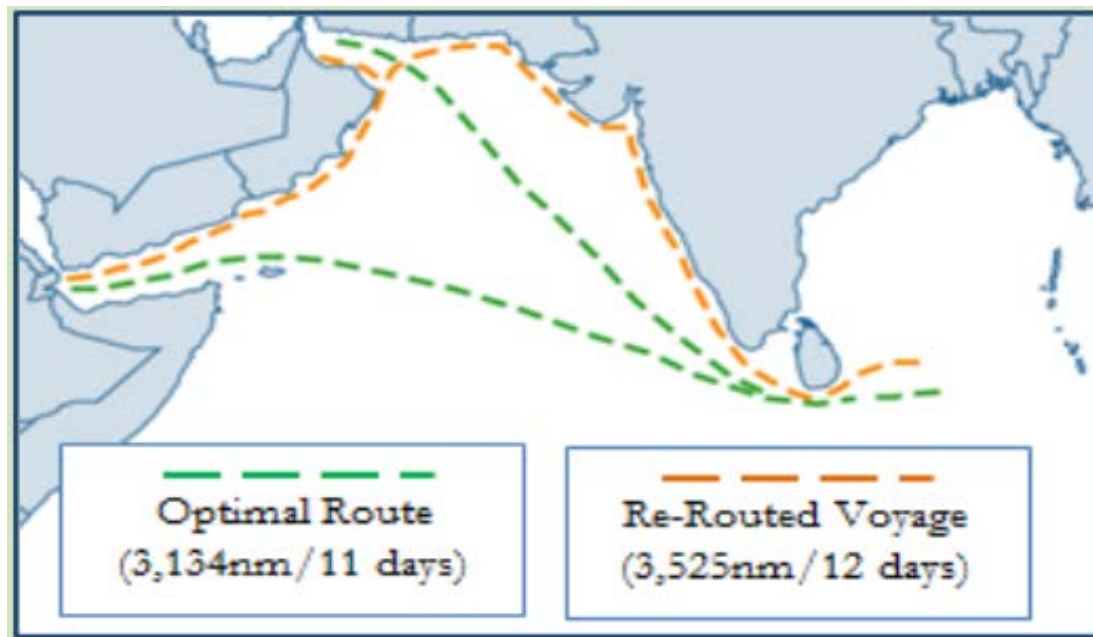


Figure 2. Rerouting of Vessels Due to Piracy

Source: One Earth Future Foundation, *The Economic Cost of Somali Piracy 2011*, Oceans Beyond Piracy, 2011, 21, accessed 12 December 2014, http://oceansbeyondpiracy.org/sites/default/files/economic_cost_of_piracy_2011.pdf.

Insurance: As piracy became a very real threat to commercial shipping in the Indian Ocean, insurance companies began charging for piracy related coverage. These included policies against war risk and kidnapping and ransom. In 2011, as pirates ventured farther from the Somali coast, insurance companies expanded the war risk

region to include larger portions of the Indian Ocean. In 2012, clients paid a total of \$550.7 million for this coverage.¹⁷

Labor: Transiting high risk areas entitles seafarers to double wages. This is also true when they are hostages. With the expansion of high risk areas farther into the Indian Ocean, this cost shipping companies \$471.6 million in 2012.¹⁸

Ransoms: While both the number of vessels captured in 2012, and the average ransom paid, decreased, the numbers are still significant. Commercial shipping spent \$31.75 million on ransoms. However, the cost of negotiations, repairing pirated vessels, and legal fees a¹⁹mounted to 100 percent of the cost of ransoms bringing the total spent on ransoms and recovery to \$63.5 million in 2012.²⁰

Counter Piracy Organizations: In 2012, the Trust Fund to Support Initiatives of States to Counter Piracy off the Coast of Somalia, the United Nations Office of Drugs and Crime, the Contact Group on Piracy off the Coast of Somalia, the Djibouti Code of Conduct, the United Nations Development Programme–Somalia, EUCAP NESTOR, Regional Anti-Piracy Prosecution & Intelligence Coordination Centre, the PiraT Project, and Oceans Beyond Piracy spent a collective \$24.08 million to counter piracy.²¹

Prosecutions and Imprisonment: Over 40 individual countries prosecuted and tried individuals for acts of piracy in 2012. Africa, Europe, North America, and Asia spent \$14.89 million on these proceedings in that twelve month period.²²

What is most significant is that less than one percent of the above cost of piracy is dedicated to changing the paradigm from which HOA piracy evolved. Over ninety-nine percent of the \$6.1 billion spent on piracy in 2012 focused on at-sea measures designed to thwart attacks rather than creating sustainable solutions in Somalia. Companies are

slowly realizing that preventative steps taken to change the culture and economy of Somalia itself might save them millions in at-sea measures. K Line, Maersk Line, Stena Line, Nippon Yusen Kabushiki Kaisha Line, Mitsui OSK Line, Shell, and British Petroleum have begun to donate to job creation and building initiatives in Somalia, but the sums pale compared to those spent on attack prevention measures.²³

Political Implications

In early 2011, pirates captured two American couples sailing their vessel northeast of Somalia. As assets arrayed to rescue them, U.S. forces had two mandates: (1) rescue the American hostages; and (2) do not let the hostage takers get the Americans on land. However, the higher priority of the two mandates was the latter. Rescuing the hostages was second to ensuring they did not reach land.²⁴

In early 2012, the threat to other hostages nearly cancelled a rescue operation for Jessica Buchanan. Negotiators worried that a rescue attempt for her might result in another American hostage being killed in retaliation.²⁵

Later that year, an operation to rescue an American hostage in Somalia was disapproved because he was being held with other foreign national hostages. The political risk of accidentally killing a foreign national hostage, while trying to rescue an American hostage, was too high. As a result, that hostage remained in Somalia for two more years until his captors released him.²⁶

These recent examples of U.S. operations are illustrative of the deep fear that policymakers have for piracy's political implications. Kidnap and ransom of Americans has given organizations like Al Shabaab and Al Qaeda great power to influence follow-on U.S. action. These organizations are well aware of this fact and actively vie to

purchase hostages from pirates who have taken prisoners. Terrorist groups who hold Americans, and who are willing to execute them in retaliation for rescue attempts or counter piracy operations, wield great sway over decisions made in the capital. It is imperative that piracy is prosecuted and stamped at every level and in every part of the world if the United States wants to retain its freedom of action.²⁷

Piracy also directly affects a country's ability to police its waters and its trade. Off the coast of Somalia, pirates routinely flaunt the prohibition on selling charcoal. In addition to raiding vessels and taking hostages, pirates undermine the fledgling government by maintaining a thriving business of smuggling up and down the coastline.

Strategic Implications

Piracy presents every nation with the serious concern that there may exist, or may develop, a potential intersection between pirates and ideological terrorist movements such as Al Qaeda or other associated entities. The terrorist attacks of 11 September 2001 have forced us to take another look at how organizations might leverage other opportunities in the future to export terror into the United States. Repeated attempts by organizations to terrorize the country by attacking transportation assets moving into and around the country suggest that pirated vessels might be an avenue for exploitation.

This threat to worldwide shipping has gotten increased scrutiny over the past few years. The International Maritime Organization has developed security measures to combat this threat. The United States has been the most proactive by instituting precautions to prevent these threats. The United States now monitors containers during loading and along the entire transport chain. It also expects that its most important trading partners comply with these precautions as well. The goal is twofold; to prevent

equipment that might otherwise be used in the conduct of a terrorist act from falling into pirate/terrorist hands, and to prevent vessels from being hijacked and used as weapons themselves.

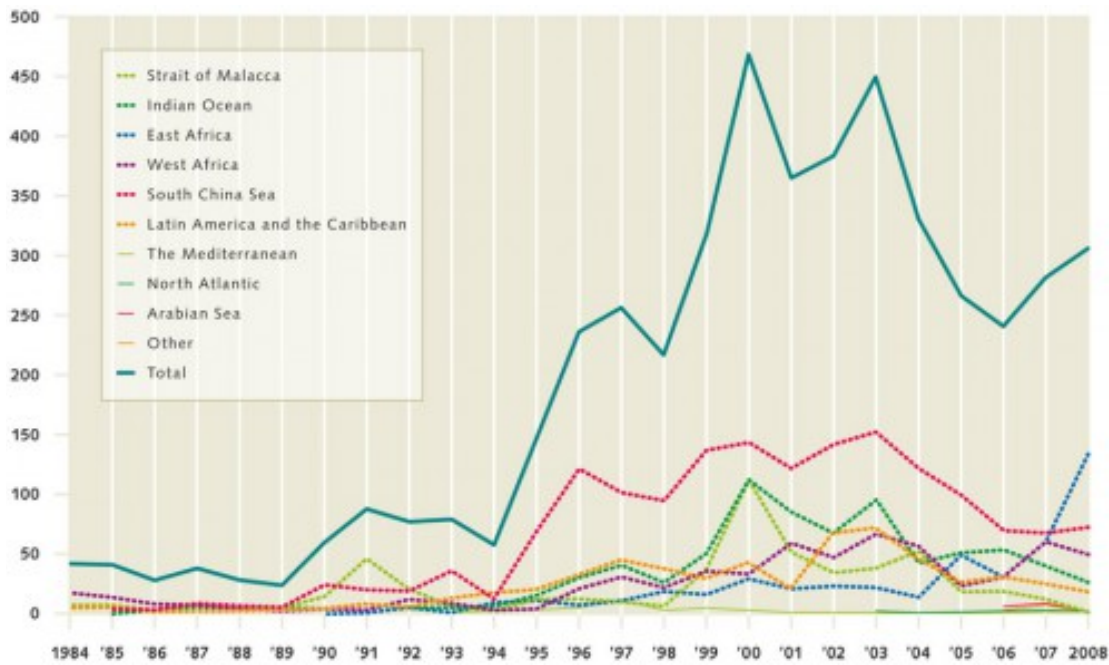


Figure 3. Worldwide Piracy Attacks

Source: World Ocean Review, “Obstacles to global shipping: Piracy and terrorism,” accessed 15 January 2015, <http://worldoceanreview.com/en/wor-1/transport/piracy-and-terrorism/>.

Despite a marked increase in piracy early in the century, it has since decreased in all parts of the world except for the waters off East Africa, and particularly Somalia (see figure 3). Because the Suez Canal, a global common, feeds directly into the Indian Ocean, it funnels massive amounts of shipping traffic directly into pirate waters. As a result, pirate attacks and activity have centered on the main maritime circulation areas of

the Indian Ocean. The effluence of maritime traffic from the Red Sea into the Indian Ocean sees a tremendous amount of pirate activity. Over that last few years, rather than patrol the coast of Somalia, pirates have begun to focus their patrols on the shipping lanes (see figure 4).

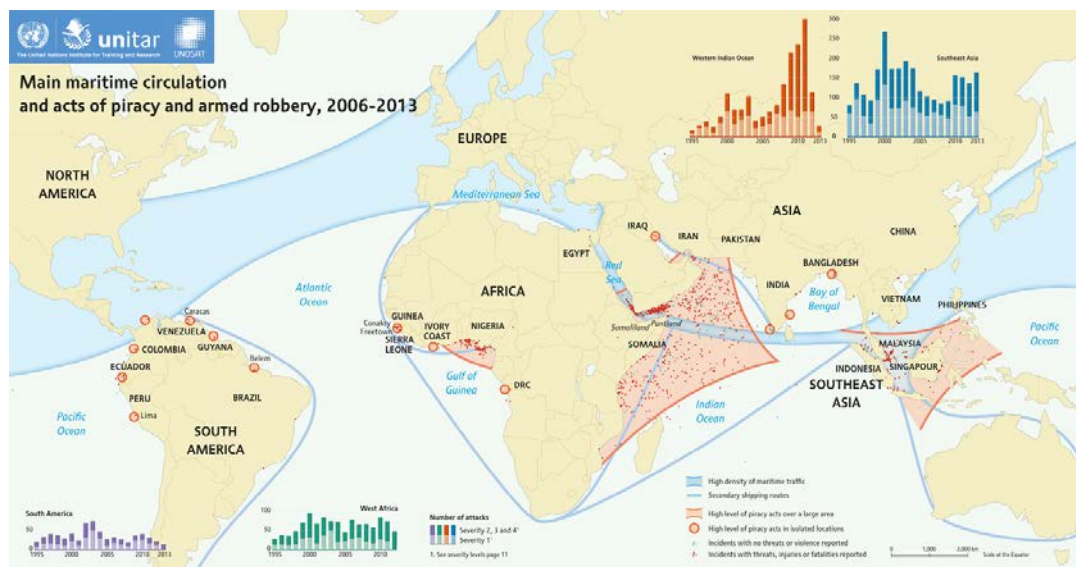


Figure 4. Main Maritime Circulation

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 9, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

This has created a huge challenge for shipping companies trying to manage their bottom line. However, it also presents the United States with the strategic concern that pirates might collude with terrorist organizations and use the appropriated vessels or equipment in the conduct of a terrorist attack. Security is a huge concern and challenge for shipping companies and the process by which it is managed is extremely complex. It

involves multiple stakeholders, industries, regulatory bodies, modes of transport, operations systems, legal frameworks and terms of liability. While the European Conference of Ministers of Transportations directs that all stakeholders are responsible for the safety of the container trade, a single breach of security at seaport container terminals, marshalling yards, street stops, or parking areas can compromise the entire logistics chain.²⁸

Numerous studies have illustrated the effects that a maritime terrorist attack would have on the U.S. economy. Scenarios using a radioactive dirty bomb attack on Los Angeles concluded that it would cost the U.S. economy \$58 billion. All ports in the United States would close for a week in response to the attack and it would take over three months to process the resultant container congestion. This study focused on the economic threat and did not take into account the human casualty toll or damage to infrastructure such an attack would create. The consequences would be catastrophic.²⁹

These estimates used Los Angeles port as the model for the scenario. However, the Los Angeles port is not even one of the world's largest ports. Using 2007 numbers, Los Angeles handled 8.4 million twenty-foot equivalent units, Hamburg handled 9.9 million twenty-foot equivalent units, and Singapore handled 27.9 million twenty-foot equivalent units. If an attack occurred in a port like Singapore, the effect would be substantially larger than the Los Angeles scenario and would have worldwide ripple effects.³⁰

Countries stipulate certain requirements to the shipping industry, but the financial responsibility for implementing the necessary security measures falls directly and solely on the shippers themselves. The Organization for Economic Cooperation and

Development has estimated the cost to implement these equipment and personnel requirements at \$1.3 billion and \$730 million a year to sustain and maintain them. Most experts believe that these mandated security measures have driven up transportation costs substantially. The Organization for Economic Cooperation and Development has suggested that the threat of terrorist attacks in the United States have cancelled out about half of the productivity gains in logistics in the past ten years.³¹

The strategic implications of pirates and terrorist organizations working together are not farfetched. Al Shabaab works side by side in Somalia with the pirates who patrol the waters. Many of the personnel work as members in both organizations. The potential for a terrorist organization to use pirated vessels in an attack, to block main avenues of transit and commerce, to deny or degrade major African ports, or simply to create a floating bomb certainly exists. Policymakers must consider this potential, weigh the importance of dealing with piracy in Somalia, and decide what resources to allocate.

Human Costs

For many years, pirates treated hostages relatively well as they represented money in the form of ransoms. These hostages were worth more alive than dead and the pirates went to great lengths to ensure their commodity was protected so that, when the time came, they could be ransomed for large sums of money. They were also valuable as leverage to demand the release of other captured pirates.

However, pirates in recent years have become significantly more violent and the likelihood of surviving a pirate hostage scenario has decreased substantially. Only four pirate hostages died in 2008. However, in 2011, that number climbed to twenty-four. The length of captivity for hostages has also increased substantially. Average captivity times

are now at five months and the M/V Iceberg 1 and journalist Mike Moore spent almost three years in captivity.

While fatalities and length of captivity are two ways to describe the human costs, the U.S. must also consider the long-term effects that captivity and threats have on the health and welfare of an individual. Of those taken hostage, pirates used at least sixty percent as human shields or physically abused them.³² The physical conditions, threats against their life, and long-term stress certainly have lasting impacts to a person's health. There are also long-term psychological affects that hostages and their families will undergo for many years after such an experience.

¹ Henry Kissinger, "The Pitfalls of Universal Jurisdiction," *Foreign Affairs* (July/August 2001), accessed 5 November 2014, <https://www.globalpolicy.org/component/content/article/163/28174.html>.

² Legal Information Institute, "*Jus Cogens*," Cornell University Law School, accessed 5 November 2014, http://www.law.cornell.edu/wex/jus_cogens.

³ Ibid.

⁴ Kissinger.

⁵ Center for Constitutional Rights, "Factsheet: Universal Jurisdiction," accessed 5 November 2014, <http://ccrjustice.org/learn-more/faqs/factsheet%3A-universal-jurisdiction>.

⁶ US President, 3.

⁷ Ibid., 4.

⁸ Ibid., 3.

⁹ Jonathan Bellish, *The Economic Cost of Somali Piracy 2012*, Oceans Beyond Piracy, 2013, 8, accessed 15 December 2014, http://oceansbeyondpiracy.org/sites/default/files/attachments/View%20Full%20Report_1.pdf.

¹⁰ Teo Kermeliotis, "Somali Pirates Cost Global Economy '\$18 billion a Year'," *CNN*, 12 April 2013, accessed 23 August 2014, <http://edition.cnn.com/2013/04/12/business/piracy-economy-world-bank/>.

¹¹ One Earth Future Foundation, 4.

¹² Ibid.

¹³ Belish, 10.

¹⁴ Ibid., 20-25.

¹⁵ Ibid., 25-27.

¹⁶ Ibid., 27-28.

¹⁷ Ibid., 38-41.

¹⁸ Ibid., 32-34.

¹⁹ EUCAP refers to the European Union's capacity building effort in the HOA and the Western Indian Ocean. Nestor is one of the Argonauts (brave heroes according to Greek mythology, assembled on a ship called the Argo) and a renowned advisor in Greek mythology.

²⁰ Ibid., 17-20.

²¹ Ibid., 41-46.

²² Ibid., 34-37.

²³ Ibid., 5.

²⁴ Daily Mail Reporter, "Were they Targeted in Retaliation? Pirate warns of 'Regrettable Consequences' as four U.S. Citizens are Hijacked off Somali Coast," *Daily Mail*, 20 February 2011, accessed 4 April 2015, <http://www.dailymail.co.uk/news/article-1358538/4-US-citizens-SV-Quest-yacht-hijacked-Somali-pirates-Were-targeted-retaliation.html>.

²⁵ Ibid.

²⁶ Josh Hammer, "The Long Captivity of Michael Scott Moore," *Outside*, 13 October 2014, accessed 4 April 2015, <http://www.outsideonline.com/1926901/long-captivity-michael-scott-moore>.

²⁷ Daily Mail Reporter.

²⁸ World Ocean Review, "Obstacles to Global Shipping: Piracy and Terrorism," accessed 15 January 2015, <http://worldoceanreview.com/en/wor-1/transport/piracy-and-terrorism/>.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² John Alexander, *Piracy: The Best Business Model Available* (MacDill Air Force Base, FL: JSOU Press, 2013), 35.

CHAPTER 3

RESEARCH METHODOLOGY

Overview

The changes in how and where piracy has been conducted over the last decade are illustrative and clearly demonstrate a shift in the causes and motivators behind the acts.

This paper will analyze the following trends using the logic chart below:

1. Number of pirate attacks in HOA
2. Violence in HOA piracy
3. Size of ransoms paid
4. Range of pirate operations
5. Value of vessels attacked

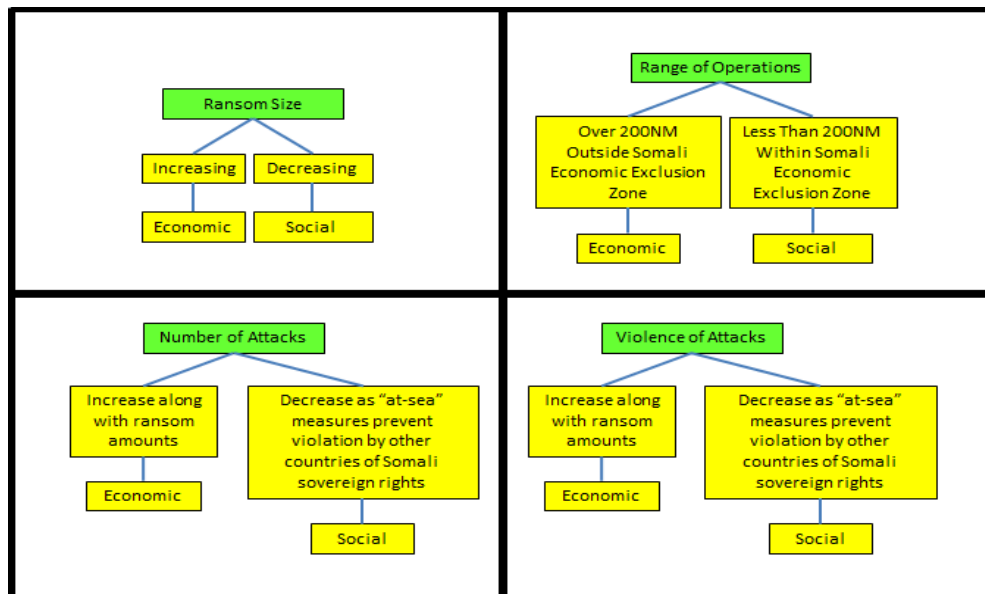


Figure 5. Etiology Logic Chart

Source: Created by author.

The patterns of the first four trends will then be layered to ascertain if the changes over time vary in a synchronized fashion. This visual normalization of factors should indicate a correlation, or lack thereof, between the various four trends. If they change in a synchronized pattern, correlation likely exists. However, if no pattern is obvious, it is likely that the trends do not influence one another. Regression analysis will also be used to determine if there is a correlation between the number of attacks and the below four factors. The combination of deductive and empirical analysis will allow for the determination of whether contemporary piracy is primarily socially or economically driven.

1. Average ransom paid per year
2. Total yearly ransoms paid
3. Somalia per capita gross domestic product (GDP)
4. Number of vessels transiting the Suez Canal

Once the dominant driver has been identified as either social or economic, the paper will consider whether current at-sea measures are sufficient to offset this driver and prevent piracy. If the driver is determined to be social in nature, the paper will investigate whether the U.S. counter piracy strategy is effective enough to override the underlying social drivers. If the dominant factor is determined to be economic in nature, the paper will consider the current fiscal situation in Somalia and seek to determine if the risk of capture and death overrides the economic influencers.

At its conclusion, the paper will determine what the primary driver behind HOA piracy is. Based on this, it will recommend if U.S. current counter piracy strategy should remain unchanged or if it should expand to include on-shore measures.

CHAPTER 4

ANALYSIS—ECONOMIC OR SOCIAL

Number of Pirate Attacks in HOA

The Western Indian Ocean and the coast of Somalia have witnessed the highest numbers of piracy in the world over the last ten years and are second only to Southeast Asia when looking at piracy from 1995 to the present. At its peak from 2010-2013, piracy in the Western Indian Ocean accounted for roughly the same numbers as the rest of the world's piracy combined. Piracy in the Western Indian Ocean also accounts for the largest growth rate of piracy seen in any part of the world from 1995-2011.¹

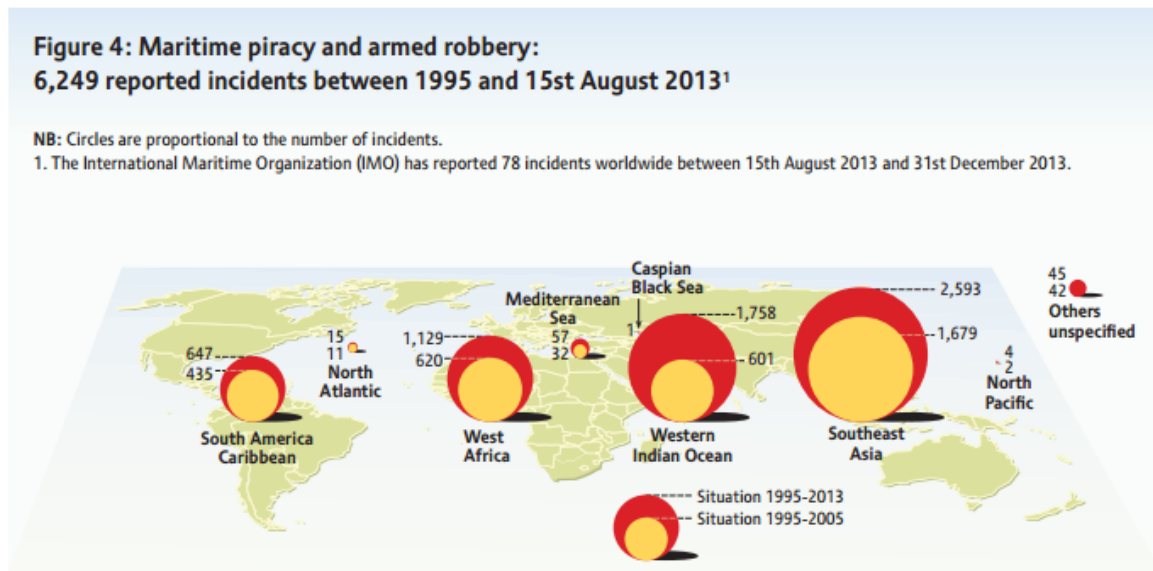


Figure 6. Maritime Piracy and Armed Robbery Incidents
Reported, 1995-15 August 2013

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 12, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

HOA piracy was originally the result of illegal fishing following the 1991 civil war involving the removal of Barre's government of Somalia. A trend observer, factoring in only the social component of territorial overreach by other nations, would therefore expect to see a low level of piracy following the 1991 fall of the Somali government. A slow and graduated uptick in piracy would then occur as foreign vessels began to infiltrate Somalia's unprotected sovereign waters and as Somalis gradually made the decision to defend their resources by attacking vessels in retaliation. From 1995-2000, figure 7 represents what an observer, looking only at the social aspect of Somali piracy, would expect.

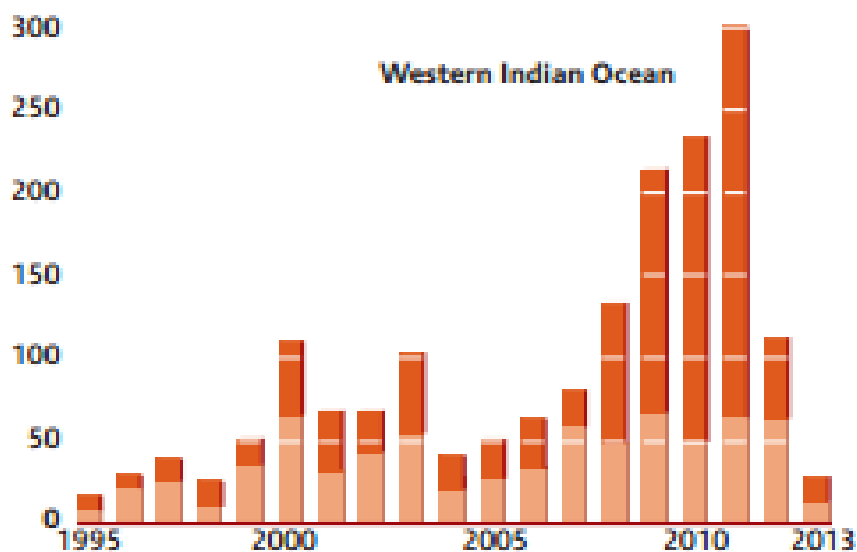


Figure 7. Western Indian Ocean Pirate Attacks, 1995-2013

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 7, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

In 2001, following the 11 September attacks, Task Force-150 changed to CTF-150 and became a patrol force in the HOA region. The mission of CTF-150 was to promote maritime security in order to counter terrorist acts and related illegal activities, which terrorists use to fund or conceal their movements. This was to be accomplished using Maritime Security Operations that included Assist and Approach Visits; Visit, Board, Search and Seizure; and Interdiction Patrols; all of which would deter both illegal fishing and piracy in the region.² If the etiology of HOA piracy were solely the social pressure of reestablishing territorial control and deterring illegal fishing, an observer would expect to see a decline in pirate attacks after 2001 as CTF-150 countered these issues; and from 2001-2004, this is what is reflected.

However, from 2005-2011, the number of pirate attacks substantially increases which contraindicates the social factor of defending sovereign territory and resources as being the primary etiology. After 2001, CTF-150 was addressing illegal fishing as part of its mission mandate. It was essentially doing what Somali's government could not and protecting the country's sovereign waters. However, while an observer would expect piracy to decrease because of CTF-150 actions, piracy number trends only conform until 2005 at which point they begin to increase again. Additionally, the single greatest year over year jump in number of pirate attacks occurred in 2009, the same year as the formation of CTF-151 whose charter was specifically counter piracy.³ (This 2009 explosion in piracy happens to coincide with the second largest increase in yearly ransoms paid. This will be addressed in a following section).

If the sole driver behind HOA piracy was the recovery of territorial waters and resources, an observer would expect to see numbers as those reflected in figure 7 from

1995-2004. Given the same assumed etiology, and with the introduction of CTF-150 and CTF-151 protecting Somalia's sovereign rights, the reduction of illegal fishing and dumping, and the restitution of fishing incomes to Somali nationals, an observer would expect that decline to continue. However, as it does not, it contraindicates the notion that piracy, after 2004, was motivated by a desire to regain sovereign resources and was in fact influenced by a different factor.

Violence in HOA Piracy

The Western Indian Ocean holds the distinction of having the highest severity of piracy of any location in the world. In the majority of attacks since 1995, violence has been a critical factor in the conduct of the pirates toward the crew and vessels that they have pirated. The International Maritime Organization's Global Integrated Shipping Information System project created a severity index that quantifies severity of a pirate attack in the following manner:

- Severity 4: one person (or more) dead or missing.
- Severity 3: actual violence reported, one person (or more) wounded or taken hostage, ship taken.
- Severity 2: threat of violence or mutiny ("crew involved").
- Severity 1: no threat of violence reported.⁴

The charts in figure 8 indicate the high level of violence that has become endemic to HOA piracy, and how since 1995, violence was more likely to occur rather than less likely to occur during pirate operations. In the same period, compared with its closest counterpart, HOA piracy was fifty percent more likely to be violent than piracy in Southeast Asia. In HOA piracy's peak years, 2009-2011, a pirate attack was more likely

to include violence by a factor of three-to-one. This contrasts with the second most violent pirate location, Southeast Asia, which at its worst, was only a one-to-one ratio.

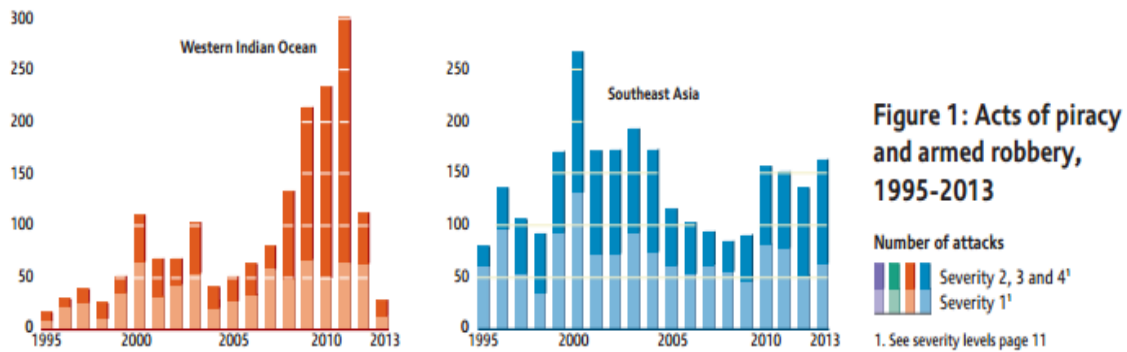


Figure 8. Acts of Piracy and Armed Robbery, 1995-2013

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 7, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

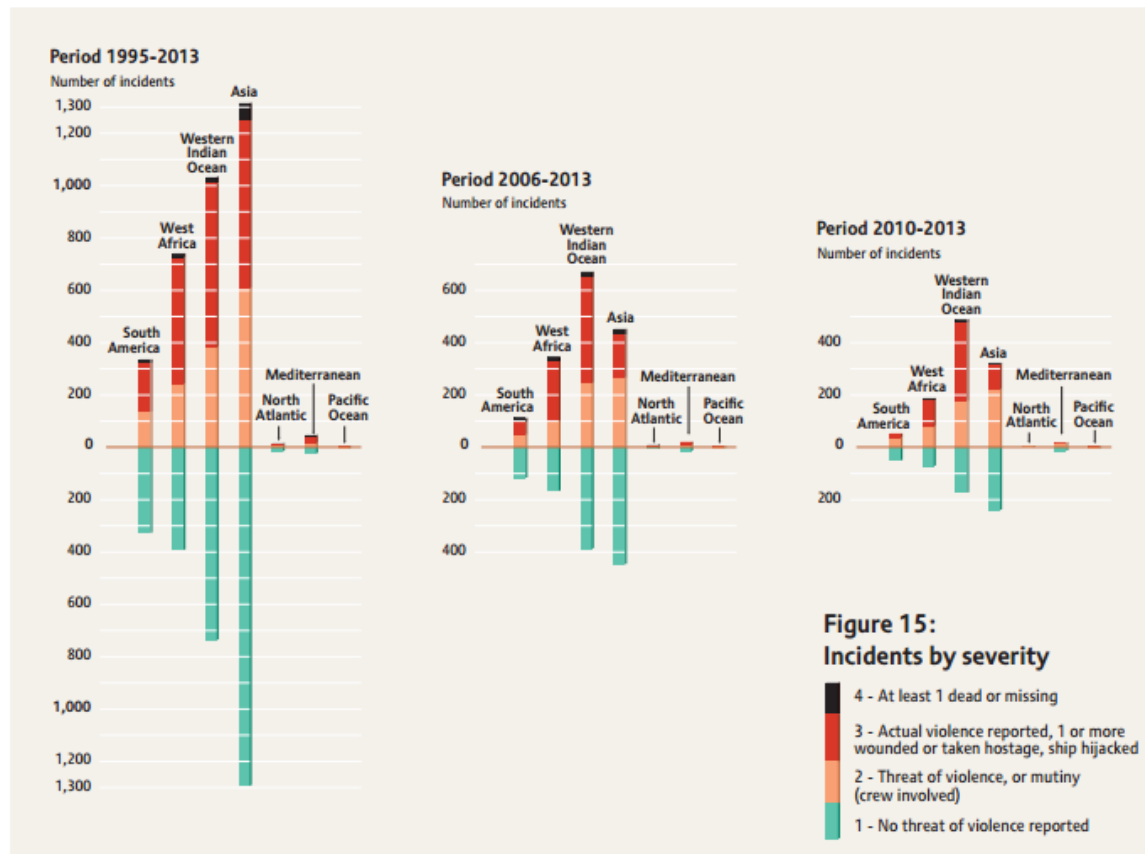


Figure 9. Incidents by Severity, 1995-2013

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 25, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

Some of the rise in violence was a corollary to the increased use of higher caliber weapons and even rocket propelled grenades during pirate attacks. As ransoms increased and as financiers became involved, the incentive and pressure to conduct successful attacks grew. The ready availability of automatic weapons and explosive munitions like those found in Mogadishu's Bakara Market, and which were easily available throughout

any city in the country, made this a natural and logical progression of the business of piracy.⁵

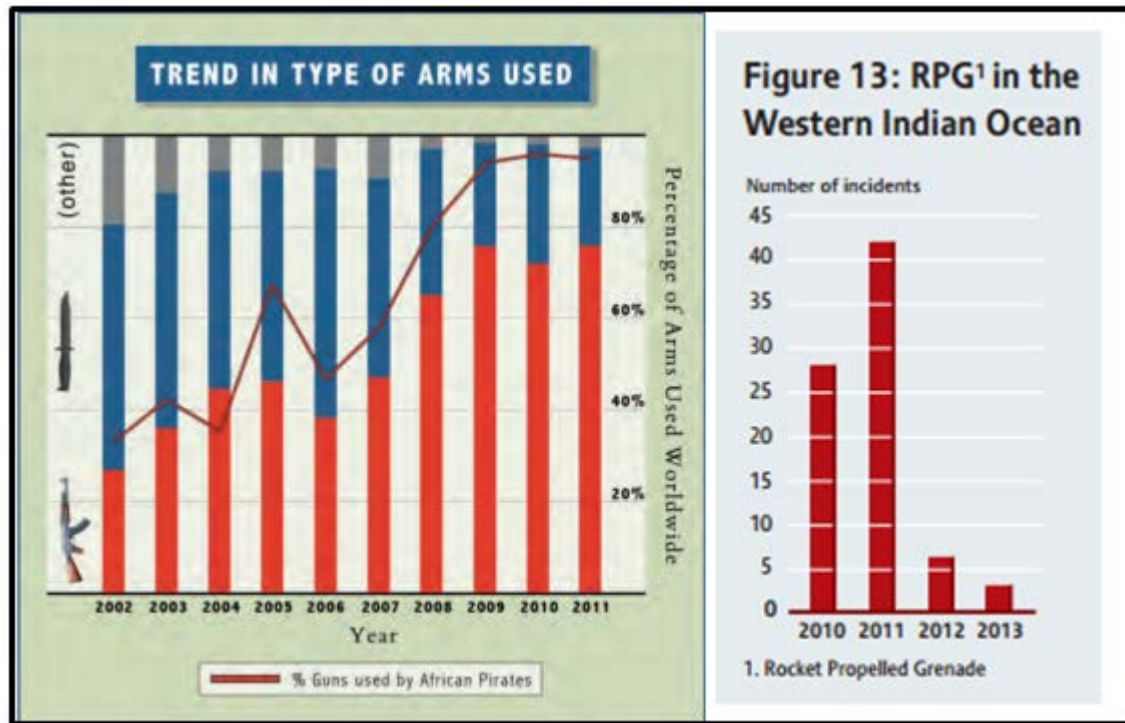


Figure 10. Types of Arms Used in Pirate Attacks

Source: One Earth Future Foundation, *The Economic Cost of Somali Piracy 2011*, Oceans Beyond Piracy, 2011, 38, accessed 12 December 2014, http://oceansbeyondpiracy.org/sites/default/files/economic_cost_of_piracy_2011.pdf; United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 23, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

Prior to 2008, violence, or the threat of violence, occurred during HOA pirate operations. However, it was always less likely to occur than to actually occur. In fact, only in 1998 and 2004 did it approach a ratio of occurring fifty percent of the time.⁶

Violence in HOA piracy began as a necessary evil to enforce restitution of resources and the cessation of illegal dumping and fishing. Prior to 2008, these more altruistic social drivers regulated the violence during piracy. However, 2008 saw a five-fold increase in ransoms paid which coincided with the first year that violence in pirate operations exceeded fifty percent. In 2009 and 2010, as ransoms exploded, violent pirate operations would outnumber non-violent by a ratio of two-to-one. At piracy's zenith in 2011, when ransoms were at their highest, that ratio would rise to three-to-one. As the ransom money increased, violence became more easily justified. Using only the factor of violence in piracy as the determiner, the point at which the economic etiology overrode the social etiology was in 2008.

Size of Ransoms Paid

For many years after the fall of Barre's government, Somalis were not ransoming vessels back to their owners, but were "fining" them for trespassing in their sovereign waters and encroaching on their resources.⁷ Initially, it was about punishing the infraction and a restitution of their rights more than it was about a windfall ransom. Because of this outlook, ransoms remained relatively low through 2007.

However, financiers began to underwrite more complex and expensive pirate operations making them more successful. Shipping companies realized that the cost associated with faster travel, increased security measures, and longer routes was often so high that it was cheaper to pay the occasional ransom. These factors combined to create a flashpoint in the piracy market. In 2008, due to increased piracy, increased violence during pirate operations, and increased ransom demands from financiers, pirates collected ransoms totaling \$20 million; a 500 percent increase over 2007.⁸

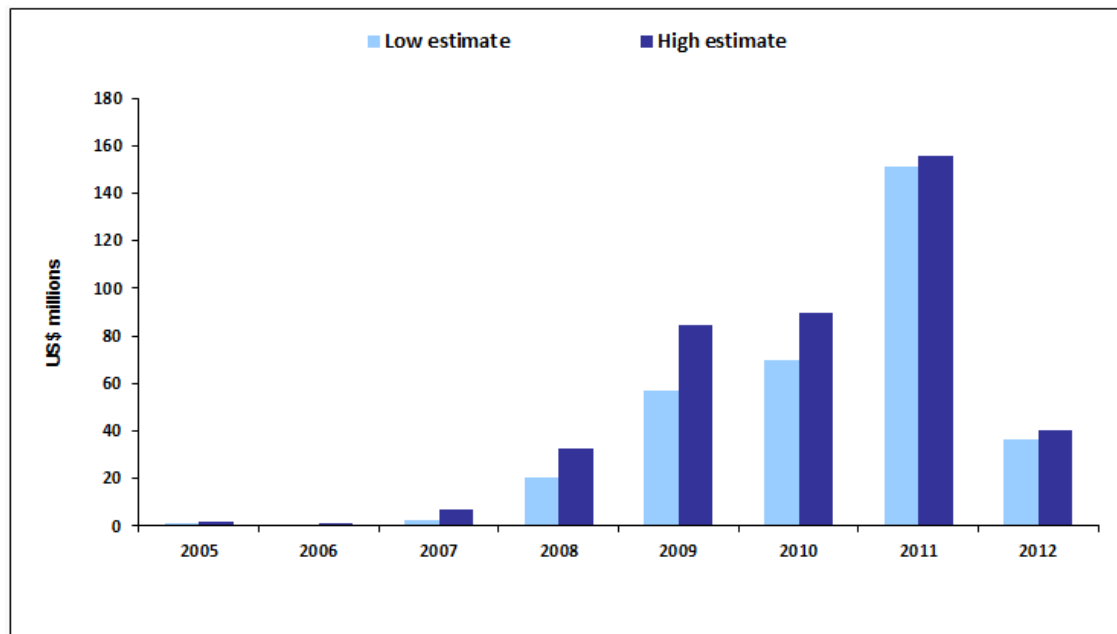


Figure 11. Total Ransoms Paid–Indian Ocean Piracy, 2005-2012

Source: United Nations Conference on Trade and Development, *Maritime Piracy Part I: An Overview of Trends, Costs and Trade-related Implications* (New York: United Nations, 2014), accessed 12 December 2014, http://vi.unctad.org/digital-library/article10/?act=show&doc_name=1029-maritime-pir.

This was merely the start of a four-year explosion in ransom prices that would eventually top out at over \$160 million. In the years following 2007, as a result of these exorbitant ransoms, the Western Indian Ocean would see its largest growth in piracy as well as its greatest increase in the violence associated with this piracy. The influx of immense ransoms into the poverty-stricken culture of Somalia overrode any nationalistic defense of fishing and sovereign rights. The year 2007 signaled a shift from social drivers to economic drivers as Somalis were concerned less about their country's resources and more and more about how they could line their pockets.

Range of Pirate Operations

One of the factors that has contributed to the increase in the severity and effectiveness of HOA piracy over the past few years has been their ability to conduct pirate operations farther from the coastline. Somali pirates have been able to extend their attacks to greater distances from shore as they have begun to employ larger mother-ships from which to operate. This has allowed them to attack larger oceangoing vessels, attack vessels that have moved farther from the coast in an effort to elude pirates, and increased their on-station time by providing a refit and refuel point at sea.

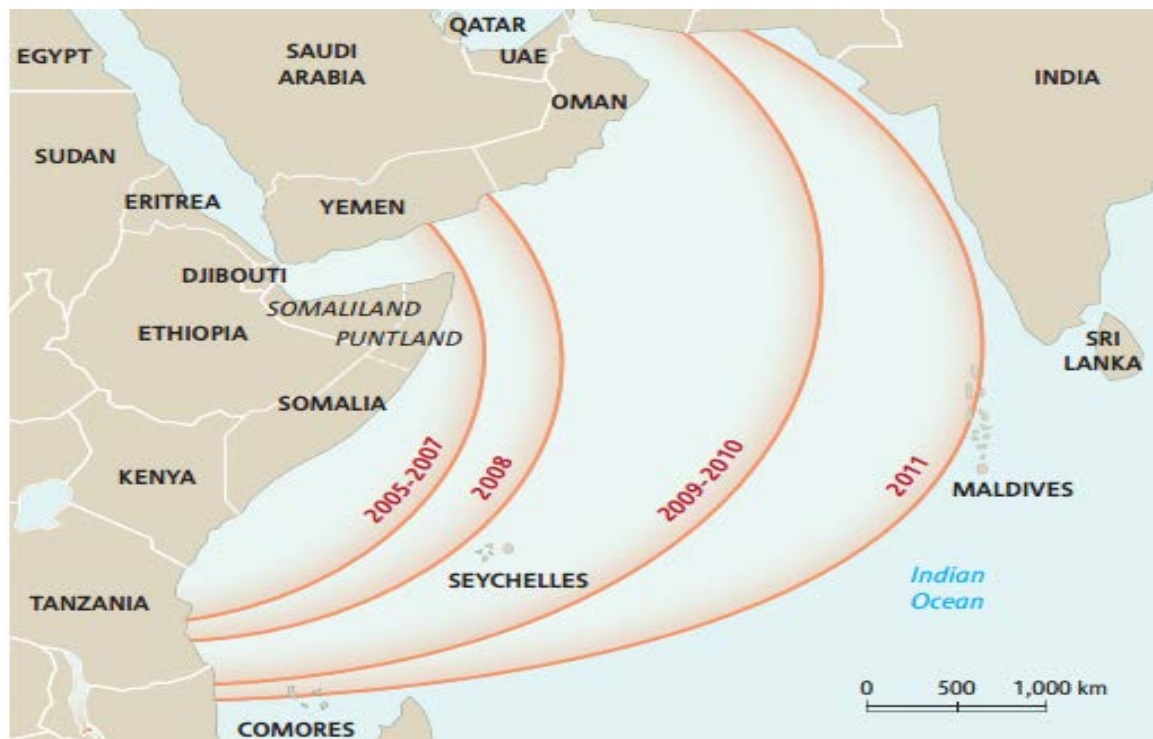


Figure 12. Range of Indian Ocean Pirate Operations

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 22, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

Almost all countries claim twelve nautical miles of territorial waters within which they control traffic and access. From twelve miles out to 200 miles, in most cases, countries control an Exclusive Economic Zone which allows them control over the resources in those areas of the ocean. These resources include energy production, exploration, and most importantly for Somalis, fishing rights. An observer could expect piracy that was based on the social driver of nationalism and defense of sovereignty to extend out as far as 200 nautical miles off the coast of Somali in order to protect the Somali economic zone.

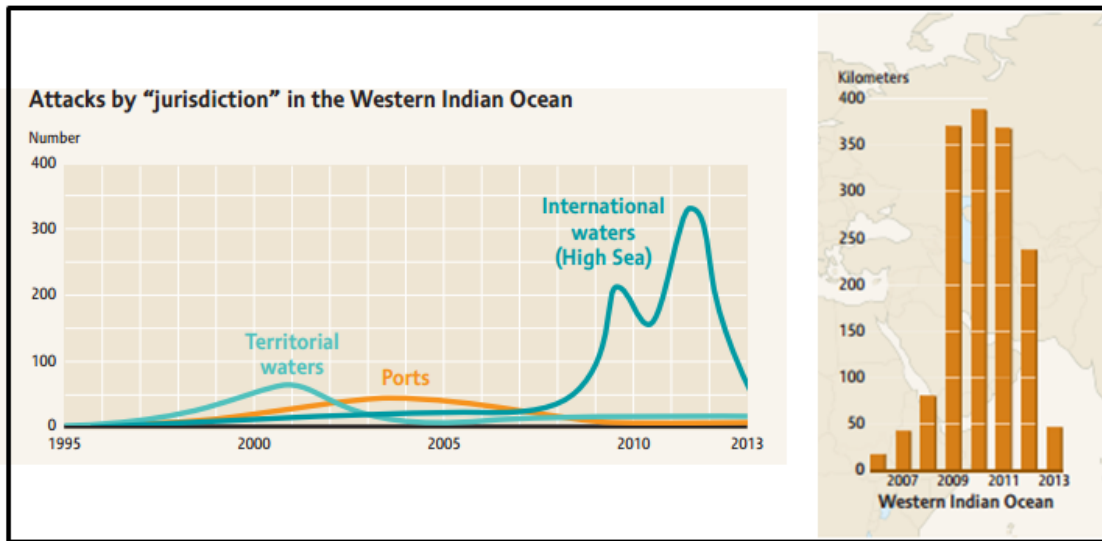


Figure 13. Attacks by Jurisdiction in the Western Indian Ocean

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 23, 26, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

However, if piracy extended beyond this 200 nautical mile zone, the cause can be determined to be something other than social drivers. As the charts above demonstrate, piracy in the Western Indian Ocean occurred within the economic zone until 2008, which would not contraindicate nationalistic drivers for piracy. However, in 2009, the average distance from shore of a pirate attack jumped from forty nautical miles to 200 nautical miles. This 2009 jump in piracy ranges happened to coincide with a three-fold jump in ransoms paid. Taken unilaterally, the ranges from shore of pirate attacks indicate that social drivers may have ceased to be the primary factor in attacks by 2009. By comparing ransoms paid per year with piracy ranges, it can be deduced that the primary etiology post-2009 was economic in nature versus social.

Value of Vessels Attacked

The size and type of vessels attacked over the years has changed to reflect a commensurate change in driver; from social to economic. HOA piracy has targeted fewer smaller fishing vessels infringing their sovereign waters and has focused on high value cargo and container vessels. In HOA piracy's early years, smaller fishing vessels were targeted within Somalia's territorial and economic waters as a way of enforcing their rights over their resources. However, in 2007, the gross tonnage of targeted vessels began to significantly increase and has increased exponentially each year since. This trend toward the larger ocean-going vessels demonstrates a shift away from ideological targeting and toward those targets that provide the highest economic return.

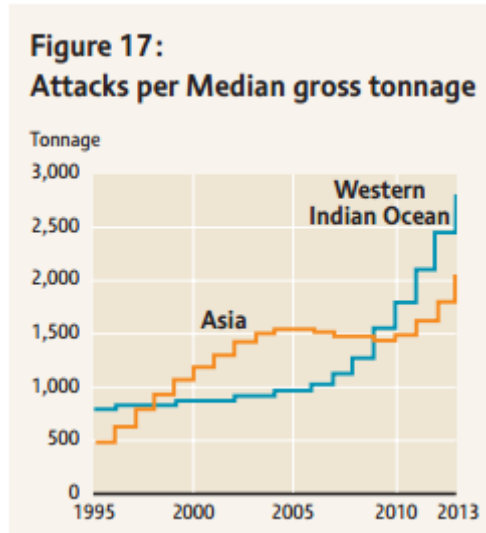


Figure 14. Attacks per Median Gross Tonnage

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 26, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

If Somalis were targeting vessels which were infringing on their national resources, an observer would expect to see a preponderance of fishing vessels targeted. However, when considering the charts in figure 15, it is evident that HOA piracy has focused on the most valuable vessels, not necessarily those that infringe sovereign rights.

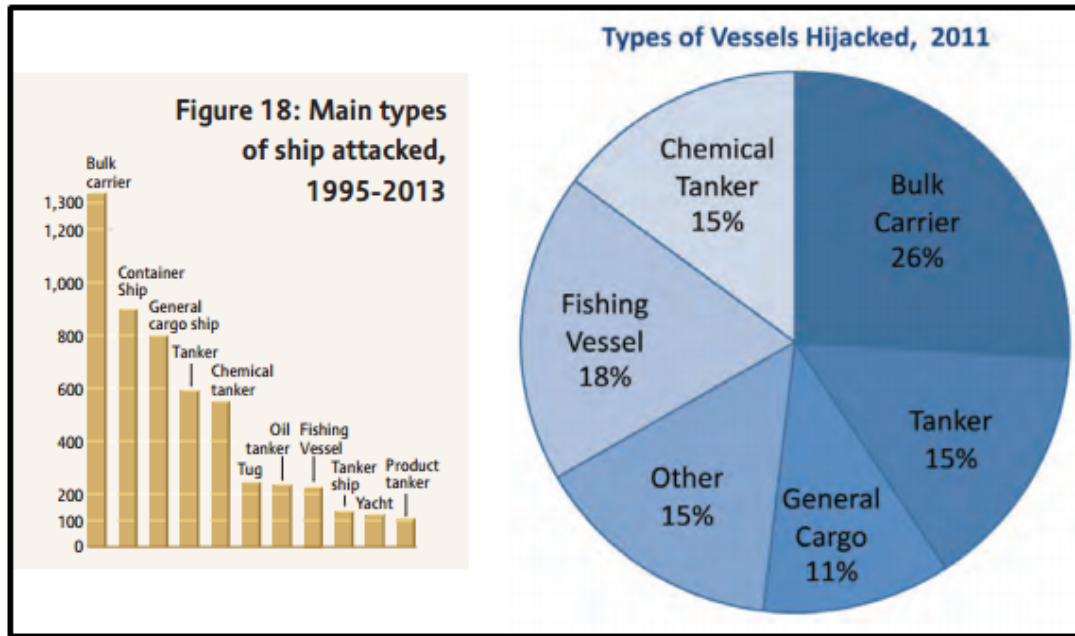


Figure 15. Types of Vessels Targeted

Source: United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 26, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf; One Earth Future Foundation, *The Economic Cost of Somali Piracy 2011*, Oceans Beyond Piracy, 2011, 11, accessed 12 December 2014, http://oceansbeyondpiracy.org/sites/default/files/economic_cost_of_piracy_2011.pdf.

In fact, HOA pirates have disproportionately attacked bulk carriers, container ships, cargo ships, tankers, and even tugs over fishing vessels. None of the seven most attacked vessel types infringe upon Somali resources. However, they are the more valuable targets. In fact, in 2011, which was the zenith of HOA piracy, only eighteen percent of vessels attacked were fishing vessels. While these charts do not break down the ratios by year, the pie chart shows that by 2011 at the latest, pirates were no longer concerned with fishing infringements and were focusing on the economic side of piracy.

Normalizing the Trends

Analyzing each of these five trends independently is suggestive of a potential change in the etiologies of HOA piracy away from social drivers toward economic drivers. Normalizing and overlaying the graphs of the first four trends provides a more elucidative perspective on what has changed over the years and the interrelationship of the four factors.

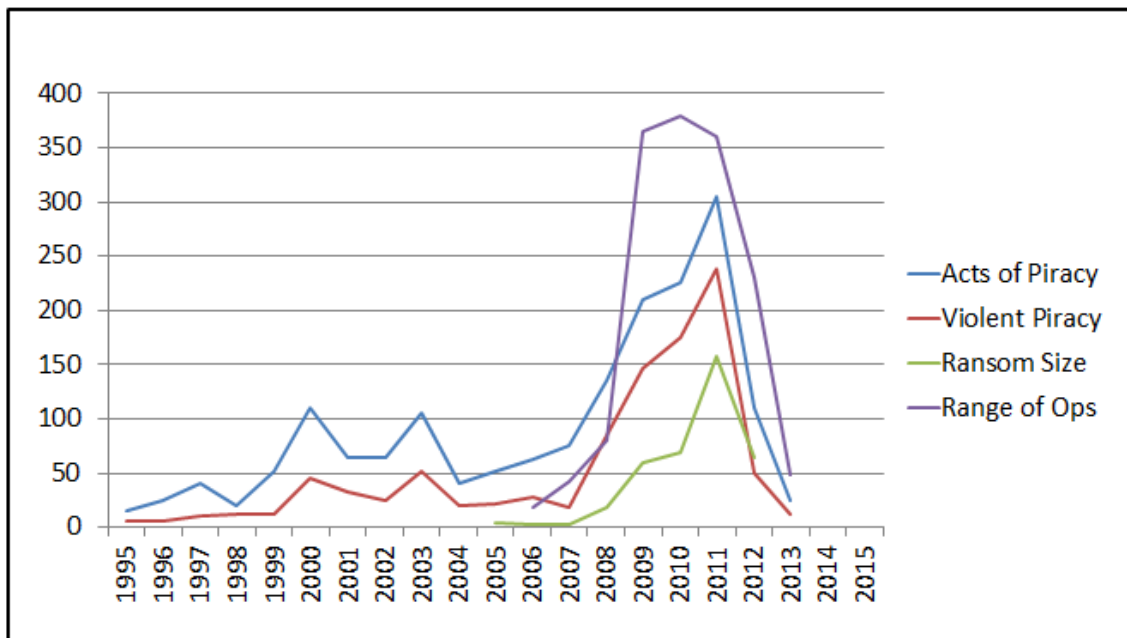


Figure 16. Normalized Piracy Trends #1

Source: Created by author.

The most glaring observation is that all four trends are directly linked. This relationship results in almost instant and commensurate changes in the other trends. It is clear that as ransom sizes began to increase in 2008, it created an explosion in the number

of pirate attacks conducted, the violence of those pirate attacks, and the lengths (both distance traveled and violence employed) that pirates would go to secure the most profitable vessels. What is most notable is the interrelationship between number of attacks conducted and the violence of those attacks. What is clear is that the more piracy that exists, the more violent it becomes. While one could logically expect an increase in the number of attacks as ransoms increased, it is not necessarily intuitive that the violence used would increase disproportionately. This signals the presence of an influence that is not social in nature, but rather economic.

Before it can be determined whether the U.S. HOA piracy strategy must address etiologies rather than just focus on at-sea measures, the primary motivating factor must be ascertained. Looking at the chart below, it is clear that each of the four factors reaches a point where social drivers are replaced by economic drivers.

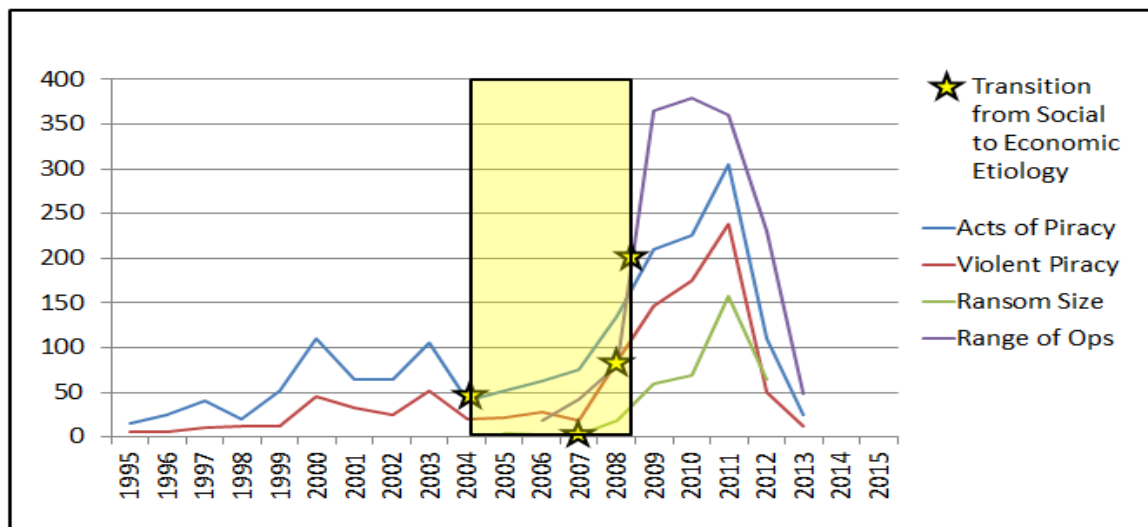


Figure 17. Normalized Piracy Trends #2

Source: Created by author.

The first trend, Acts of Piracy, became economically driven in 2004 when economic incentives overrode the threats posed by CTF-150 who was itself policing illegal fishing and dumping as well as piracy. The second trend, Violence in Piracy, saw the shift from social to economic drivers in 2008 when violence in pirate attacks exceeded the fifty percent mark for the first time and then continued to become more and more violent in the successive years. For Ransom Size, economic factors became the primary incentive after 2007 when ransoms increased 500 percent. When Somali pirates began to attack vessels outside of 200 nautical miles in 2009, they were no longer defending their sovereign resources but were responding to the potential of windfall ransoms.

Between 2004 and 2008, the causes behind Western Indian Ocean piracy shifted from a defense of the homeland to an economically driven and extremely violent vocation. If U.S. counter piracy strategy evolves to include addressing piracy's underlying causes, the focus must be on the economic factors in Somalia rather than on social ones. Because economic drivers are now the primary etiology behind contemporary HOA piracy, a comprehensive strategy may need to include addressing these drivers.

Quantitative Analysis

While an a priori approach to determining the underlying cause of piracy can be persuasive, an a posteriori method may be more influential. To determine empirically if economic drivers are the primary incentive for contemporary piracy, quantitative regression analysis of the following factors will be conducted:

1. Number of ships transiting the Gulf of Aden per year
2. Average ransom size per year
3. Total ransoms paid each year
4. Somalia per capita GDP

This statistical process estimates the relationship among variables and is used to predict and forecast likely outcomes. Using a dependent variable (the number of yearly attacks) and an independent variable (the four factors listed above), this process will estimate whether a relationship exists among the variables. Table 1 shows the data that will be used.

Table 1. Regression Analysis Data

Year	Number of Attacks	Ships Transitting Suez Canal	Average Ransom Paid	Annual Ransom Paid	Somalia Per Captia GDP
2000	33	14142			417.4
2001	19	13986			421.85
2002	20	13447			428.41
2003	23	15667			436.25
2004	13	16850			446.21
2005	47	18224	0.4	3	456.41
2006	24	18664	0.1	2	473.06
2007	55	20384	1.2	8	489.02
2008	113	21415	1.4	30	505.16
2009	218	17228	2.2	80	525.1
2010	219	17993	3.7	88.3	535.96
2011	237	17799	5	159.62	547.32
2012	75	17225	4	31.75	562.32
2013	15	16596			

Source: Created by author.

Once the regression is conducted, four factors must be analyzed to determine if a correlation exists between the two variables. They are:

1. R-Squared - A statistical measure of how close the data are to the fitted regression line. The closer the number is to one, the more it indicates a

correlation. An R-Squared of one would indicate 100 percent correlation and a direct and perfect relationship.

2. F-Value - The ratio of the mean regression sum of squares divided by the mean error sum of squares. Its value will range from zero to an arbitrarily large number. A value above four indicates correlation. The higher it is above four, the higher the correlation.
3. Significance of F - This indicates the probability that the Regression output could have been obtained by chance. A small Significance of F confirms the validity of the Regression output. For example, if Significance of F = 0.030, there is only a three percent chance that the Regression output was merely a chance occurrence. Significance of F values that indicate correlation are below 0.05.
4. P-Value - Provides the likelihood that results are real and did not occur by chance. The lower the P-Value, the higher the likelihood of correlation. For example, a P-Value of 0.016 for a Regression coefficient indicates that there is only a 1.6 percent chance that the result occurred only as a result of chance. Correlation would be indicated by a P-Value smaller than 0.05. The smaller it is, below 0.05, the greater the correlation.

Average Ransoms Paid per Year versus Number of Pirate Attacks

Table 2. Regression Analysis of Average Ransoms Paid per Year versus Number of Pirate Attacks

SUMMARY OUTPUT					
<i>Regression Statistics</i>					
Multiple R	0.722794799				
R Square	0.522432322				
Adjusted R Square	0.442837709				
Standard Error	65.4627678				
Observations	8				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	28127.75619	28127.75619	6.563664317	0.042795315
Residual	6	25712.24381	4285.373968		
Total	7	53840			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	44.12278761	38.67317515	1.140914534	0.297388617	-50.507063
X Variable 1	35.27876106	13.7701967	2.561964933	0.042795315	1.584303565

Source: Created by author.

Conducting a regression analysis of the average ransoms paid per year versus the number of attacks gives the data in table 2. While the P-Value suggests there is not a correlation (above 0.05), and the R-Squared data shows that there is only a fifty-two percent likelihood of correlation, both the F Value (above four) and the Significance of F (below 0.05) indicate a correlation exists. From this data, it can be surmised that a slight correlation exists between the average yearly ransom size and the number of attacks perpetrated. This somewhat supports the premise that piracy is economically driven.

Total Ransoms Paid per Year versus Number of Pirate Attacks

Table 3. Regression Analysis of Total Ransoms Paid per Year
versus Number of Pirate Attacks

SUMMARY OUTPUT					
<i>Regression Statistics</i>					
Multiple R	0.921630034				
R Square	0.849401919				
Adjusted R Square	0.824302239				
Standard Error	36.76094097				
Observations	8				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	45731.79931	45731.79931	33.84114509	0.001133721
Residual	6	8108.200688	1351.366781		
Total	7	53840			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	49.9069863	18.13727362	2.751625595	0.033220154	5.526676539
X Variable 1	1.462100752	0.251336044	5.81731425	0.001133721	0.847103606

Source: Created by author.

Conducting a regression analysis of the total ransoms paid per year versus the number of attacks gives the data in table 3. This data indicates a strong correlation between the total amount of ransoms paid per year and how many attacks are conducted. R-Squared indicates an eight-five percent likelihood of correlation and the large F-Value (significantly above four) as well as Significance of F and P-Values substantially below 0.05 support correlation. This strongly indicates that piracy is economically driven.

Somalia per Capita GDP versus Number of Pirate Attacks

Table 4. Regression Analysis of Somalia per Capita GDP
versus Number of Pirate Attacks

SUMMARY OUTPUT					
<i>Regression Statistics</i>					
Multiple R	0.782020645				
R Square	0.611556289				
Adjusted R Square	0.576243224				
Standard Error	55.10981741				
Observations	13				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	52596.7575	52596.7575	17.31813127	0.001585308
Residual	11	33408.01173	3037.091975		
Total	12	86004.76923			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	-543.3053633	151.5864894	-3.584127882	0.004287521	-876.944977
X Variable 1	1.306591228	0.313970775	4.161505889	0.001585308	0.615546212

Source: Created by author.

Conducting a regression analysis of the Somalia per capita GDP versus the number of yearly pirate attacks gives the data in table 4. This data shows only a sixty-one percent likelihood of correlation based on R-Squared. However, the F-Value is much larger than four and both the Significance of F and the P-Value are well under 0.05 which indicates correlation. Based on these factors, there is likely a moderate correlation between Somalia per capita GDP and the prevalence of pirate attacks. This supports the premise that piracy is economically driven.

Ships Transiting the Suez Canal versus Number of Pirate Attacks

Table 5. Regression Analysis of Ships Transitting the Suez Canal
versus Number of Pirate Attacks

SUMMARY OUTPUT					
<i>Regression Statistics</i>					
Multiple R	0.367251646				
R Square	0.134873771				
Adjusted R Square	-0.009313933				
Standard Error	88.10826309				
Observations	8				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	7261.603853	7261.603853	0.935404108	0.370813688
Residual	6	46578.39615	7763.066024		
Total	7	53840			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>
Intercept	519.6902153	410.8243742	1.264993627	0.252782484	-485.5608147
X Variable 1	-0.02128167	0.022004225	-0.967162917	0.370813688	-0.075124069

Source: Created by author.

Conducting a regression analysis of the number of ships transiting the Suez Canal versus the number of yearly pirate attacks gives the data in table 5. The returned data indicates a lack of correlation between piracy and the amount of shipping traffic through the Suez Canal. It seems that piracy occurs regardless of how busy the Gulf of Aden is. This would indicate that the levels of piracy are not necessarily influenced by how many vessels transit off the shores of the Horn of Africa. While this does not speak for either a social or an economic driver, it is important to note that piracy continues to occur, and at higher levels, even as shipping is reduced.

Are At-Sea Measures Enough to Overcome the Economic Drivers?

After determining that the primary driver for contemporary HOA piracy is likely economic in nature, it remains to be seen if the current at-sea measures being taken as part of the U.S. counter piracy strategy are effective and contraindicate addressing on-shore economic issues. It has been established that the current strategy has the authority to address on-shore issues if necessary. However, to date, ninety-nine percent of all anti-piracy dollars spent are allocated on at-sea measures.⁹

While there is no doubt that the current worldwide action against HOA piracy has had a significant and positive impact, lowering attacks from their height in 2011 of slightly over 300 to just twenty-five in 2013,¹⁰ it was at a collective cost of between \$566.47 million and \$683.01 million.¹¹ These numbers are not sustainable in the current fiscal environment. The U.S. military faces imminent and substantive budget cuts. U.S. anti-pirate activities will also come under scrutiny as the international community looks to Somalia to shoulder more of the responsibility for its own waters. If at-sea measures are reduced in the future, piracy is likely to increase and may return to 2011 levels.

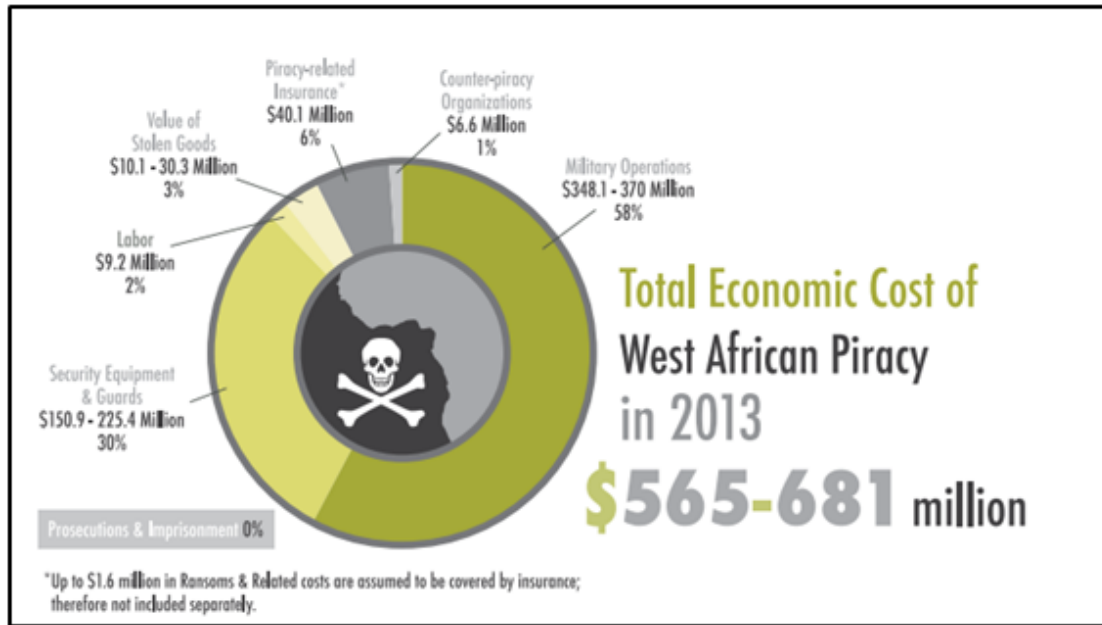


Figure 18. Total Economic Cost of West African Piracy in 2013

Source: Jens Vestergaard Madson, Conor Seyle, Kellie Brandt, Ben Purser, Heather Randall, and Kellie Roy *The State of Maritime Piracy 2013*, Oceans Beyond Piracy, 2014, 70, accessed 15 December 2014, http://oceansbeyondpiracy.org/sites/default/files/attachments/SoP2013-Digital_0_0-1_0.pdf.

To understand just how influential the economic drivers are to an average Somali, one must consider the current economic situation in Somalia against the amounts that piracy offers its takers. The Gross National Income per capita in Somalia is \$550 per annum.¹² Figure 19 contrasts this amount with those of citizens in the United States, France, the United Kingdom, Iraq, and Afghanistan. Even compared to Iraq and Afghanistan, who have been involved in a countrywide war for the past few years, Somalia has a lower per capita income than both. In fact, of every country worldwide, only Uganda, Togo, Niger, Madagascar, Malawi, Liberia, Guinea, Guinea-Bissau, Gambia, Ethiopia, Eritrea, the Democratic Republic of Congo, Central African Republic,

and Burundi, have lower per capita incomes.¹³ This makes the draw of enormous ransoms incredibly hard to overcome with force alone.

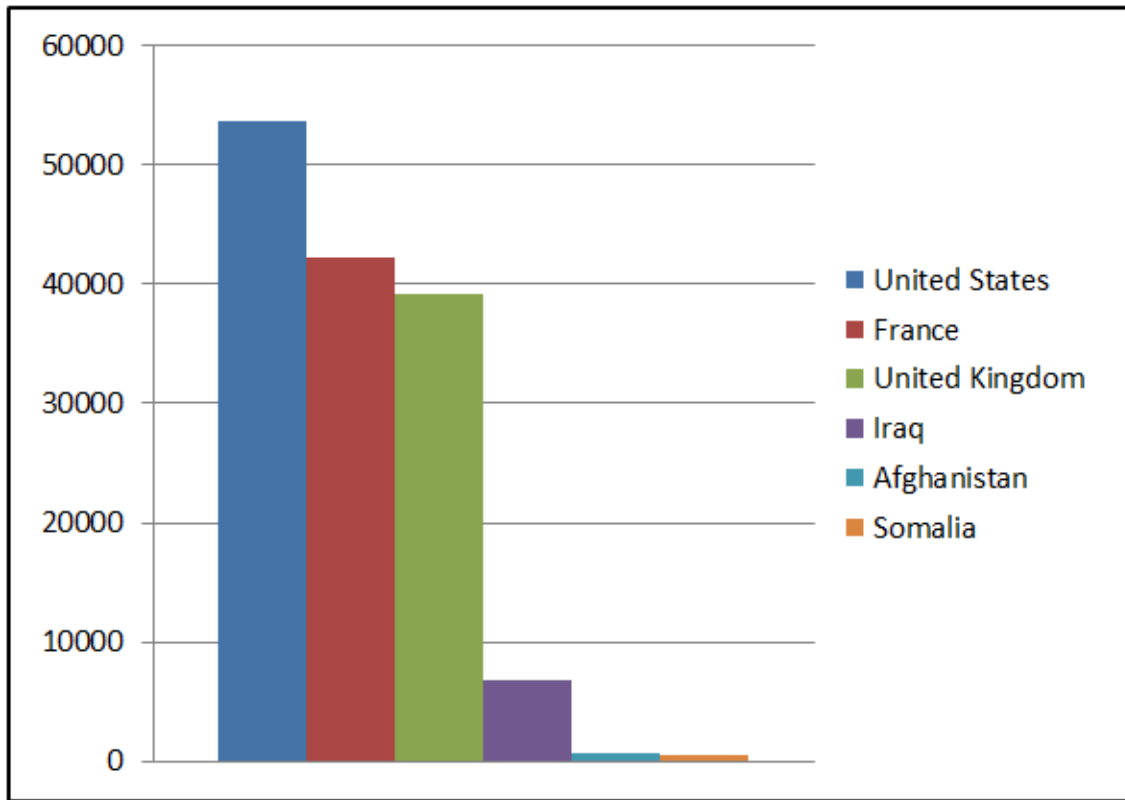


Figure 19. GNI per Capita

Source: Created by author.

While the bulk of ransoms goes to the financiers (about fifty percent), the remainder is divided up amongst the pirates and port militia. On average, a pirate's share ranges from just 0.01 to 0.025 percent of the total ransom. However, with ransoms running into the millions of dollars, this equates to an average share, per ransom, of \$30,000 per pirate.¹⁴ If a pirate were a participant in just two successful pirate operations

per year, their yearly income would surpass that of every other country in the world except for Australia, Denmark, Norway, Qatar, and Switzerland.¹⁵

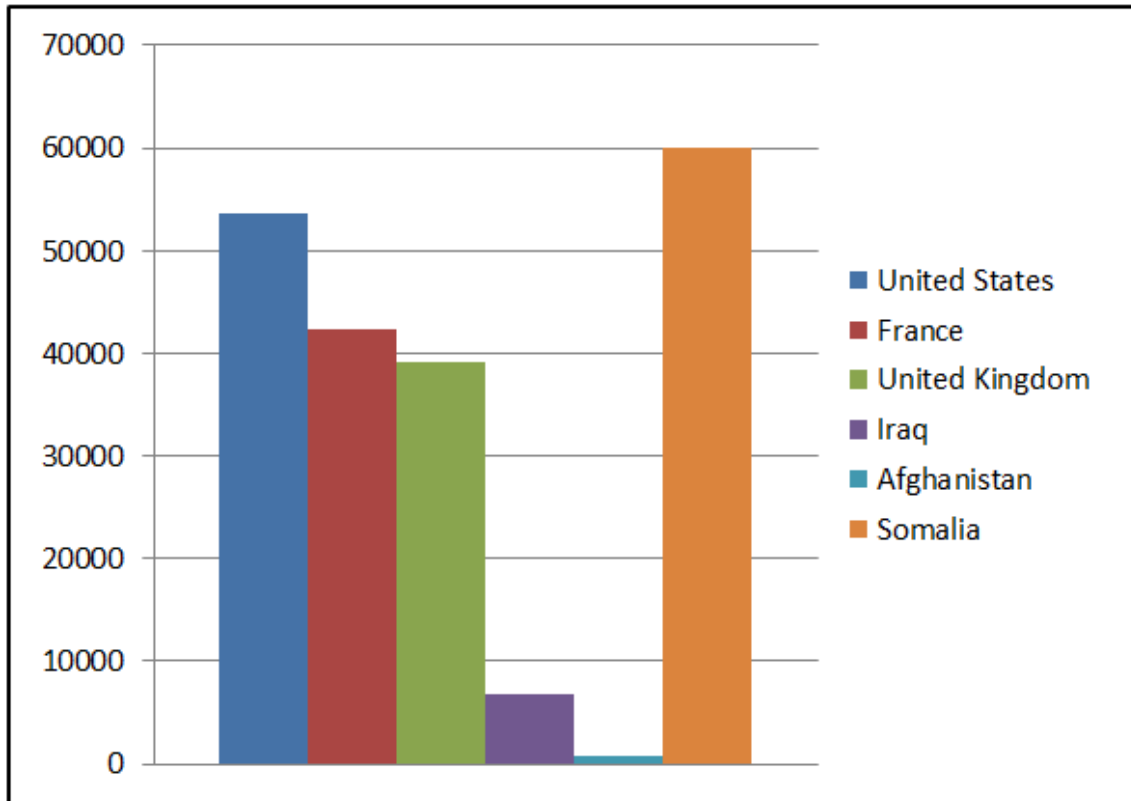


Figure 20. GNI per Capita Adjusted

Source: Created by author.

Analysis Summary

The analysis of Somali piracy is illustrative in two ways. First, by analyzing the trends since 1995, both deductively and empirically, it is evident that there is a shift in etiologies over time from social drivers to economic ones. Second, by taking an in-depth look at Somalia's current economic situation, it is clear that substantial outlays of U.S.

resources and monies are required to dis-incentivize piracy. While current U.S. anti-piracy strategy has been effective since 2012, this commitment may not be sustainable given the nation's fiscal constraints.

There exists a very prevalent notion that Somali pirates are simply defending their country against foreign nations who have pilfered their national resources, illegally fished and dumped in their waters, and ignored their sovereignty. The trends considered above show this to be true, to a point. However, what they also indicate is that there is a clear shift away from these ideological and nationalistic trends toward a more economically based driver. This change seems to occur sometime between 2004 and 2008.

Investigation of the trends in Somali piracy shows that after 2008, and into contemporary pirate operations, the primary driver is economic in nature vice social or ideological.

A study of the economic situation in Somalia outlines a country that is among the poorest in the world. However, by geographical happenstance, they border one of the most travelled and commercial routes in the ocean. This has presented them with a unique opportunity in the form of piracy. Somalia offers no vocation or education which would allow pirates to make similar sums of money legitimately. The vast incomes which can be had from a single successful pirate attack are worth more in the Somali culture than the risks posed by engaging in such activity. The disincentive against piracy is essentially non-existent.

Taken collectively, these two deductions should inform a move toward a U.S. counter piracy strategy that addresses the economic drivers. In a culture as poverty stricken as Somalia, it is not surprising that the economic incentive has risen to become the primary driver. In a commercial environment that can make a member of one of the

poorest societies in the world incalculably rich overnight, the risk-to-reward ratios cannot be factored as one would from a western mindset. The incentive to commit acts of piracy in a country like Somalia, where commensurate alternatives do not exist, is simply too difficult to resist.

¹ United Nations Institute for Training and Research, *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013* (New York: United Nations, 2014), 7, accessed 12 December 2014, http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

² Combined Maritime Forces, “CTF-150: Maritime Security,” accessed 12 December 2014, <http://combinedmaritimeforces.com/ctf-150-maritime-security/>.

³ Combined Maritime Forces, “CTF-151: Counter Piracy,” accessed 12 December 2014, <http://combinedmaritimeforces.com/ctf-151-counter-piracy/>.

⁴ United Nations Institute for Training and Research.

⁵ Hamza Mohamed, “Illicit Gun Trade Barrels ahead in Mogadishu,” *Al Jazeera*, 12 February 2013, accessed 4 April 2015, <http://www.aljazeera.com/indepth/features/2013/02/20132111214770878.html>.

⁶ United Nations Institute for Training and Research.

⁷ IRIN, “Somalia: Potential Goldmine for Fisherman and Piracy Declines,” 14 December 2012, accessed 12 December 2014, <http://www.irinnews.org/report/97049/somalia-potential-goldmine-for-fishermen-as-piracy-declines>.

⁸ United Nations Conference on Trade and Development, *Maritime Piracy Part I: An Overview of Trends, Costs and Trade-related Implications* (New York: United Nations, 2014), accessed 12 December 2014, http://vi.unctad.org/digital-library//article10/?act=show&doc_name=1029-maritime-pir.

⁹ Bellish, 5.

¹⁰ United Nations Institute for Training and Research.

¹¹ Jens Vestergaard Madsen, Conor Seyle, Kellie Brandt, Ben Purser, Heather Randall, and Kellie Roy, *The State of Maritime Piracy 2013*, Oceans Beyond Piracy, 2014, accessed 15 December 2014, http://oceansbeyondpiracy.org/sites/default/files/attachments/SoP2013-Digital_0_0-1_0.pdf, page.

¹² Christopher Harress, “Secret Flow of Somali Piracy Ransoms: 179 Hijacked Ships Generated Some \$400 Million in Payments Since 2005. So Where Has it All Gone?” *International Business Times*, 4 November 2013, accessed 15 December 2014, <http://www.ibtimes.com/secret-flow-somali-piracy-ransoms-179-hijacked-ships-generated-some-400m-payments-2005-so-where-has>.

¹³ The World Bank, “GNI Per Capita, Atlas Method (current US\$),” The World Bank Group, 2014, accessed 15 December 2014, <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD?display=default>.

¹⁴ Harress.

¹⁵ The World Bank.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

Conclusion

Both deductive reasoning and empirical quantitative analysis show that, over the last decade, the underlying causes of piracy have shifted from an idealistic protection of sovereign resources and rights to a vocation fueled by enormous ransoms. While Somali piracy originally began as a means to secure a living for the local Somalis after the collapse of the federal government, it is now a lucrative and violent business that responds directly to ransom size rather than social factors. It is no longer a social matter of sovereign Somali rights but rather an economically driven criminal activity.

The international community has determined that piracy is a threat to both free commerce and trade as well as to human life and dignity. In response, it has dedicated millions of dollars and thousands of assets to its eradication. However, the collective approach has focused solely on the at-sea threat and does not address land-based causes. International law allows for the prosecution of piracy to extend onto the shores of the pirate's host country. Current U.S. policies allow for, and encourage, partnerships with both governmental and civilian agencies whose goal it is to improve conditions on land. This combination gives the United States both the authority and the ability to expand its counter piracy actions onto the shores of Somalia.

Within Somalia, there is more incentive towards, rather than against, piracy. As the fifteenth poorest nation in the world, and with few educational or vocational opportunities, windfall ransoms will continue to lure young men and boys to the sea. The ability for Somalis to make tens, if not hundreds, of times what they would working on

the open market is irresistible and will continue to offset the risk these pirates face. Only by changing the conditions on land is there a chance at truly dissuading Somalis from taking to the sea armed with Kalashnikovs.

While current U.S. counter piracy initiatives can certainly be imputed with much of the success against Somali piracy, they are merely a stopgap until the real economic problem is addressed. The current strategy cannot ultimately be successful as it relies on addressing the original social etiology rather than the contemporary economic one. Because the social drivers to protect Somalia's sovereignty and natural resources are no longer what encourage piracy, a counter piracy strategy that seeks to solve the problem by addressing those drivers is certain to fail. Somalia's economic condition must be addressed to halt piracy.

In an era of sequestration and increased scrutiny on military budgets, the allocation of over \$600 million per year to combat piracy in the Western Indian Ocean is untenable. Considering the global demand for U.S. military forces elsewhere in the world, the appropriation of numerous vessels and personnel to combat piracy in the Western Indian Ocean will become more problematic and contentious if measures are not taken to solve the underlying problem.

Recommendations

This thesis is not a recommendation against at-sea measures. In fact, the current measures taken by the U.S. government and military should continue until such a time when Somalia can effectively patrol its own waters and responsibly prosecute piracy. In its current state, neither is possible. While the paper recommends the continued application of U.S. dollars and military assets against the pirate threat, it cautions against

assuming they are a panacea for Somali piracy. For the time being, the United States must stay the course and continue to militarily prosecute piracy off Somalia's coastline.

Along with the application of the offshore military response, the U.S. military, in concert with the nascent Federal Government of Somalia, should conduct three types of bilateral and unilateral operations within the borders of Somalia. First, it should attempt to rescue all currently held hostages. Direct action operations of this sort indicate an expressed interest on the part of the U.S. military and are extremely effective in dissuading further hostage takers. Second, direct action operations against piracy safe havens, as well as recognized Al Shabaab terrorist networks and locations, should be conducted. This addresses the problem of piracy and allows the Federal Government of Somalia to expand its control beyond Mogadishu proper. Third, drone strikes must be employed against key locations and individuals determined to be contributive to both piracy and terrorism. The combination of these three land-based operations and the current at-sea measures would do much to dissuade piracy. Just as importantly, it would allow Somalia's fledgling government the time and space to gather itself into a competent and effective nation that can autonomously and independently address the current issues.

Concurrent with military action, the U.S. government must employ the Department of State as well as governmental and civilian aid organizations. The Department of State must liaise with the Somali government to help institute appropriate governmental institutions and civilian support structures. They must work to address pirate complicity at the governmental level as well as institute programs such as local coast guards, initially with equipment and funding from the United States, and ground forces comprising Somalis from all three provinces.

U.S. civilian aid organizations need to integrate with currently present international aid organizations to create new, and bolster current work and employment projects. In concert with the Somali government, aid organizations should create work programs to provide reliable incomes, improved infrastructure for quality of life, and alternative and respectable means of making a living.

As the Federal Government of Somalia gathers control of its country and builds a responsible, trustworthy, and competent land and sea force, it must grow beyond its current border of Mogadishu. Pushing both south and north, it needs to focus its forces on controlling the ports and sea lanes of travel as well as the land routes between them. Once the ports are controlled, departments such as customs and immigration should be established to monitor and regulate commerce and criminal activity in those locations. As governmental control expands into these areas of Somalia, the aid programs initiated in Mogadishu should be implemented here as well.

As security expands, so too will infrastructure. This will bring common utilities like water, electricity, telephone, radio, and television. Along with these advances comes the ability for the Somali government to promote its agenda, dispel the notion of pirates as local heroes, and expand education and opportunity into areas farther and farther from Mogadishu.

Security also allows for the establishment of legal facilities and the unhindered prosecution of pirates. These prosecutions, and their attendant sentences, can be publicized and propagandized to dissuade further criminal activities. Radio and television networks should be used to promote government messaging. A standing telephone network allows for the establishment of pirate reporting and call centers similar to those

found in the United States. This infrastructure development contributes to the facilitation of intelligence gathering and allows the Somali government to effectively target pirates, terrorists, and their safe havens.

While there is much that can be done in Somalia to combat piracy, these actions are predicated upon a country that has a semblance of security. First and foremost, the United States must contribute to the efforts of the Somali government to establish and retain control of its country. The U.S. must help it become a government that can independently promote security and defend its people. Without this occurring first, the government cannot take secondary measures. Until the Somali government can function unilaterally, the U.S. government must find itself in the role of provider, adviser, and enforcer.

Of course, this is not a long-term solution. However, if the government of Somalia cannot fight its own battles and protect its waters, and along with it the international shipping along its coastline, the United States will become an eternal steward of the Indian Ocean. The United States cannot afford this situation. While Somalia may currently seem emblematic of the past ten years of wartime morass, it sits at a watershed point. If the United States opts for the status quo, it will be employed perpetually as nothing more than an expensive shipping guardian. However, with subtle interaction and assistance, the United States may be able to nudge the course of Somalia toward stability. If it does, the United States will abdicate its current responsibilities in Somalia, protect the citizens of the United States and other countries, redirect our treasury, and bring home many of its service men and women.

BIBLIOGRAPHY

Books

Alexander, John. *Piracy: The Best Business Model Available*. MacDill Air Force Base, FL: JSOU Press, 2013.

Harkaway, Nick. *The Blind Giant*. New York: Vintage Books, 2012.

Government Documents

United Nations. *Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation*, 10 March 1988. Accessed 13 December 2014. <http://www.un.org/en/sc/ctc/docs/conventions/Conv8.pdf>.

_____. *United Nations Convention on the Law of the Sea-UNCLOS Article 105*. United Nations Oceans and Law of the Sea, 10 December 1982. Accessed 10 October 2014. http://www.un.org/depts/los/convention_agreements/texts/unclos/part7.htm.

United Nations Conference on Trade and Development. *Maritime Piracy Part I: An Overview of Trends, Costs and Trade-related Implications*. New York: United Nations, 2014. Accessed 12 December 2014. http://vi.unctad.org/digital-library/article10/?act=show&doc_name=1029-maritime-pir.

United Nations Institute for Training and Research. *UNOSAT Global Report on Maritime Piracy: A Geospatial Analysis 1995-2013*. New York: United Nations, 2014. Accessed 12 December 2014. http://unosat.web.cern.ch/unosat/unitar/publications/UNITAR_UNOSAT_Piracy_1995-2013.pdf.

US President. *United States Counter Piracy and Maritime Security Action Plan*. Washington, DC: The White House, June 2014. Accessed 13 October 2014. https://www.whitehouse.gov/sites/default/files/docs/united_states_counter_piracy_and_maritime_security_action_plan_2014.pdf.

Journals/Periodicals

Daily Mail Reporter. "Were they Targeted in Retaliation? Pirate Warns of 'Regrettable Consequences' as four U.S. citizens are Hijacked off Somali Coast." *Daily Mail*, 20 February 2011. Accessed 4 April 2015. <http://www.dailymail.co.uk/news/article-1358538/4-US-citizens-SV-Quest-yacht-hijacked-Somali-pirates-Were-targeted-retaliation.html>.

Freeman, Colin. "Piracy and Terrorism: Why Somalia?" *The Telegraph*, 10 February 2014. Accessed 19 October 2014. <http://www.telegraph.co.uk/sponsored/culture/captain-phillips-film/10367538/somali-piracy-reasons-causes.html>.

Hammer, Josh. "The Long Captivity of Michael Scott Moore." *Outside*, 13 October 2014. Accessed 4 April 2015. <http://www.outsideonline.com/1926901/long-captivity-michael-scott-moore>.

Harress, Christopher. "Secret Flow of Somali Piracy Ransoms: 179 Hijacked Ships Generated Some \$400 Million in Payments Since 2005. So Where Has it All Gone?" *International Business Times*, 4 November 2013. Accessed 15 December 2014. <http://www.ibtimes.com/secret-flow-somali-piracy-ransoms-179-hijacked-ships-generated-some-400m-payments-2005-so-where-has>.

IRIN. "Somalia: Potential Goldmine for Fisherman and Piracy Declines." 14 December 2012. Accessed 12 December 2014. <http://www.irinnews.org/report/97049/somalia-potential-goldmine-for-fishermen-as-piracy-declines>.

Kissinger, Henry. "The Pitfalls of Universal Jurisdiction." *Foreign Affairs* (July/August 2001). Accessed 5 November 2014. <https://www.globalpolicy.org/component/content/article/163/28174.html>.

Mohamed, Hamza. "Illicit Gun Trade Barrels Ahead in Mogadishu." *Al Jazeera*, 12 February 2013. Accessed 4 April 2015. <http://www.aljazeera.com/indepth/features/2013/02/20132111214770878.html>.

Online Sources

Bellish, Jonathan. *The Economic Cost of Somali Piracy 2012*. Oceans Beyond Piracy, 2013. Accessed 15 December 2014. http://oceansbeyondpiracy.org/sites/default/files/attachments/View%20Full%20Report_1.pdf.

Center for Constitutional Rights. "Factsheet: Universal Jurisdiction." Accessed 5 November 2014. <http://ccrjustice.org/learn-more/faqs/factsheet%3A-universal-jurisdiction>.

Combined Maritime Forces. "CTF-150: Maritime Security." Accessed 12 December 2014. <http://combinedmaritimeforces.com/ctf-150-maritime-security/>.

_____. "CTF-151: Counter Piracy." Accessed 12 December 2014. <http://combinedmaritimeforces.com/ctf-151-counter-piracy/>.

Encyclopedia Britannica. "Sea People." Last updated 22 December 2014. Accessed 20 March 2015. <http://www.britannica.com/EBchecked/topic/530679/Sea-People>.

Global Security. "Somalia Civil War." Accessed 11 December 2014. <http://www.globalsecurity.org/military/world/war/somalia.htm>.

International Maritime Organization. "Piracy and Armed Robbery Against Ships." Accessed 23 November 2014. <http://www.imo.org/OurWork/Security/PiracyArmedRobbery/Pages/Default.aspx>.

- International Royal Navy Museum. "Piracy," 2002. Accessed 1 March 2015.
http://www.royalnavalmuseum.org/info_sheets_piracy.htm.
- Kermeliotis, Teo. "Somali Pirates Cost Global Economy '\$18 Billion a Year'." *CNN*, 12 April 2013. Accessed 23 August 2014. <http://edition.cnn.com/2013/04/12/business/piracy-economy-world-bank/>.
- Legal Information Institute. "*Jus Cogens*." Cornell University Law School. Accessed 5 November 2014. http://www.law.cornell.edu/wex/jus_cogens.
- Madson, Jens Vestergaard, Conor Seyle, Kellie Brandt, Ben Purser, Heather Randall, and Kellie Roy. *The State of Maritime Piracy 2013*. Oceans Beyond Piracy, 2014. Accessed 15 December 2014. http://oceansbeyondpiracy.org/sites/default/files/attachments/SoP2013-Digital_0_0-1_0.pdf.
- One Earth Future Foundation. *The Economic Cost of Somali Piracy 2011*. Oceans Beyond Piracy, 2011. Accessed 12 December 2014. http://oceansbeyondpiracy.org/sites/default/files/economic_cost_of_piracy_2011.pdf.
- Vallar, Cindy. "Pirates and Privateers: The History of Maritime Piracy, Ancient Pirates." 2009. Accessed 10 March 2015. <http://www.cindyvallar.com/ancientpirates.html>.
- . "Pirates and Privateers: The History of Maritime Piracy, Medieval Pirates." 2010. Accessed 8 March 2015. <http://www.cindyvallar.com/medieval.html>.
- William III. "1698-9: An Act for the more effectuell Suppressions of Piracy." *Statutes of the Realm* 7 (1695-1701): 590-594. British History Online. Accessed 5 March 2015. <http://www.british-history.ac.uk/statutes-realm/vol7/pp590-594>.
- The World Bank. "GNI Per Capita, Atlas Method (current US\$)." The World Bank Group, 2014. Accessed 15 December 2014. <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD?display=default>.
- World Ocean Review. "Obstacles to Global Shipping: Piracy and Terrorism." Accessed 15 January 2015. <http://worldoceanreview.com/en/wor-1/transport/piracy-and-terrorism/>.

Other Sources

- Chalk, Peter. *Maritime Piracy: Reasons, Dangers, and Solutions*. Santa Monica, CA: Rand Corporation, February 2009. Accessed 2 November 2014.
http://www.rand.org/content/dam/rand/pubs/testimonies/2009/RAND_CT317.pdf.
- Davis, William M. "Analysis of the Strategy to Combat Maritime Piracy." Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2009.

Ploch, Lauren, Christopher M. Blanchard, Ron O'Rourke, R. Chuck Mason, and Rawle O. King. Congressional Research Service Report for Congress R40528, *Piracy off the Horn of Africa*. Washington, DC: Library of Congress, 27 April 2011. Accessed 2 November 2014. <http://fas.org/sgp/crs/row/R40528.pdf>.